Compounds other than ethylene oxide were not quantitated.

SOP ERG-MOR-005
Air Toxics TO-15 Quality Control Review Checklist 2018-1

Sequence ID:	L19BS 1902049	**Instrument:**	MS1	**Batch:**	B9B1907
Cal Curve (Method):	9020003	**Analyst:**	MAH	**Date Analyzed:**	2-19-19
10% Review Sample IDs:	9021401-09	**Reviewer:**	QNash	**Date:**	2/22/19
Optional Additional Review Sample IDs:		**Reviewer:**		**Date:**	

Parameter	Acceptance Criteria	Analyst Check (Initials and Date)	Task Lead/Data (Initials and Date)	10% QA Review (Initials and Date)	Optional Additional QA Review (Initials and Date)	Comments
BFB Instrument Tune Performance Check -- one per analysis sequence	Evaluation criteria presented in Section 16.1.1	2-20-19	RLB 2/22/19	QCW 2/22/19		
Initial calibration with a minimum of 5 points - quarterly	1)RSD of response factors < ±30% with two exceptions of up to ±40% (non-Tier I compounds) 2) IS response < ±40% of mean 3) RRTs for target peaks ±0.06 units from mean RRT 4) IS RTs within 20sec of mean 5) Each calibration standard within ±30% of nominal conc (for Tier I compounds)	2-20-19	RLB 2/22/19	QCW 2/22/19		L19BL
ICV(LCS) Second source calibration verification check - immediately following ICAL	The response factor ≤ ±30% DEV from calibration curve average response factor	2-20-19	RLB 2/22/19	QCW 2/22/19		L19BL
Continuing calibration verification (CCV), approximately mid-point of the calibration curve -- one per analysis sequence	The response factor ≤ ±30% DEV from calibration curve average response factor	2-20-19	RLB 2/22/19	QCW 2/22/19		2nd source
Method Blank Analysis -- one per analysis sequence	1) < 3xMDL or 0.2ppbv, whichever is lower 2) Internal Standard (IS) area response within < ±40% and IS Retention Time (RT) within ±0.33 min. of most recent initial calibration	2-20-19	RLB 2/22/19	QCW 2/22/19		

Sample 9021401-09 was a non-detect for ethylene oxide. DST 2/22/19

Compounds other than ethylene oxide were not quantitated.

Air Toxics TO-15 Quality Control Review Checklist 2018-1 (Continued)

Parameter	Acceptance Criteria	Analyst Check (Initials and Date)	Task Lead/Data (Initials and Date)	10% QA Review (Initials and Date)	Optional Additional QA Review (Initials and Date)	Comments
Replicate Analysis – one per analysis sequence /Duplicate Sample	< 25% RPD for compounds greater than 5 times the MDL	2-20-19	RMB 2/22/19	N/A - EtO		
Canister Cleaning Certification	<3xMDL or 0.2ppbv per VOC targeted compound, whichever is lower	—	RMB 2/22/19	N/A - EtO		
Preconcentrator Leak Check	≤ ± 0.2 psi/min	2-20-19	RMB 2/22/19	QW 2/22/19		
Samples/Internal Standard Check	IS area within ±40% and IS RT within ±0.33 min. of most recent initial calibration	2-20-19	RMB 2/22/19	QW 2/22/19		
COC Included and filled out	Lab receipt acknowledged, LIMS number added to COC	2-20-19	RMB 2/22/19	QW 2/22/19		
Manual Integration and peak deletion	Conforms with ERG-SOP-097 "Procedure for Manual Integration of Chromatographic Peaks"	2-20-19	RMB 2/22/19	DT 2/22/19		
Manual Calculation Check	One compound manual check must agree with software generated result		RMB 2/22/19	QW 2/22/19		
Qualifiers Check	Check to make sure LIMS data flags are correct	2-20-19	RMB 2/22/19	QW 2/22/19		E, DF, D

This review check sheet must be completed by primary data reviewer/TL/QA.

L19B5003 ethylene oxide

$$\frac{7692 \times 4.77}{58418 \times 0.2728} = 2.30 \text{ ppbv}$$

L19B5020 EtO

$$\frac{116\ (4.77)}{41375\ (0.2728)} = 0.0490 \text{ ppbv} \checkmark$$

Compounds other than ethylene oxide were not quantitated.

ANALYSIS SEQUENCE

Instrument: ERGMS#1

1902049

Printed: 2/22/2019 9:11:34AM

Calibration ID: 9020003

Lab Number	Sample Name	Analysis	Container	Order	Position	STD ID	ISTD ID	Comments
1902049-CCV1	Calibration Check	QC		1		9B12008	8L13002	
B9B1907-BLK1	Blank	QC		2			8L13002	
9020518-01	BTUT	TO-15 2019	A	3			8L13002	
9020704-01	NBIL	TO-15 2019	A	4			8L13002	
9020703-01	BTUT	TO-15 2019	A	5			8L13002	
9020710-01	MAOK	TO-15 2019	A	6			8L13002	
9020711-01	NROK	TO-15 2019	A	7			8L13002	
9021222-01	NROK D1	TO-15 2019	A	8			8L13002	
9021222-02	NROK D2	TO-15 2019	A	9			8L13002	
B9B1907-DUP1	Duplicate	QC		10				
B9B1907-DUP2	Duplicate	QC		11				
9021412-01	MAOK D1	TO-15 2019	A	12			8L13002	
9021412-02	MAOK D2	TO-15 2019	A	13			8L13002	
B9B1907-DUP3	Duplicate	QC		14				
B9B1907-DUP4	Duplicate	QC		15				
9021401-05	Willow Pond Park	TO-15 2019	A	16			8L13002	Ethylene Oxide only
9021401-06	Water Tower	TO-15 2019	A	17			8L13002	Ethylene Oxide only
9021401-07	West Neighborhood	TO-15 2019	A	18			8L13002	Ethylene Oxide only
9021401-08	Hinsdale South HS	TO-15 2019	A	19			8L13002	Ethylene Oxide only
9021401-09	WB Warehouse	TO-15 2019	A	20			8L13002	Ethylene Oxide only

Samples Loaded By Date

Randy Bauer 2/22/19

Data Processed By Date

Compounds other than ethylene oxide were not quantitated.

Sequence Name: C:\msdchem\1\sequence\L19BS.s
Comment: ANALYZE 2/19/19,9020003 exp 5/13/19, L19BS
Operator: MAH
Data Path: C:\MSDCHEM\1\DATA\L19BS\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line			Sample Name/Misc Info		
1)	Sample	1	L19BS001	BFB	BFB
2)	Sample	2	L19BS002	9020003	-CCV1 NOT USED
3)	Sample	3	L19BS003	9020003	1902049-CCV1
4)	Sample	4	L19BS004	9020003	B9B1908-CCV1
5)	Sample	5	L19BS005	9020003	FLUSH
6)	Sample	6	L19BS006	9020003	B9B1907-BLK1
7)	Sample	7	L19BS007	9020003	9020518-01
8)	Sample	8	L19BS008	9020003	9020704-01
9)	Sample	9	L19BS009	9020003	9020703-01
10)	Sample	10	L19BS010	9020003	9020710-01
11)	Sample	11	L19BS011	9020003	9020711-01
12)	Sample	12	L19BS012	9020003	9021222-01
13)	Sample	13	L19BS013	9020003	9021222-02
14)	Sample	14	L19BS014	9020003	B9B1907-DUP1
15)	Sample	15	L19BS015	9020003	B9B1907-DUP2
16)	Sample	16	L19BS016	9020003	9021412-01
17)	Sample	17	L19BS017	9020003	9021412-02
18)	Sample	18	L19BS018	9020003	B9B1907-DUP3
19)	Sample	19	L19BS019	9020003	B9B1907-DUP4
20)	Sample	20	L19BS020	9020003	9021401-05
21)	Sample	21	L19BS021	9020003	9021401-06
22)	Sample	22	L19BS022	9020003	9021401-07
23)	Sample	23	L19BS023	9020003	9021401-08
24)	Sample	24	L19BS024	9020003	9021401-09
25)	Sample	100	OFF	FIDOFF	OFF

2-20-19

Compounds other than ethylene oxide were not quantitated.

Sample	1	BFB	BFB	L19BS001	80 ML 8L13001	1
Sample	2	-CCV1 NOT USED	9020003	L19BS002	80 ML 8L13001,9B12008,BAD INJECTI	1
Sample	3	1902049-CCV1	9020003	L19BS003	80 ML 8L13001,9B12008	1
Sample	4	B9B1908-CCV1	9020003	L19BS004	80 ML 8L13001,9B13007	1
Sample	5	FLUSH	9020003	L19BS005	80 ML 8L13001	1
Sample	6	B9B1907-BLK1	9020003	L19BS006	80 ML 8L13001,	1
Sample	7	9020518-01	9020003	L19BS007	BTUT 1/27/19	1
Sample	8	9020704-01	9020003	L19BS008	NBIL 2/2/19	1
Sample	9	9020703-01	9020003	L19BS009	BTUT 2/2/19	1
Sample	10	9020710-01	9020003	L19BS010	MAOK 2/2/19	1
Sample	11	9020711-01	9020003	L19BS011	NROK 2/2/19	1
Sample	12	9021222-01	9020003	L19BS012	NROK D1 2/8/19	1
Sample	13	9021222-02	9020003	L19BS013	NROK D2 2/8/19	1
Sample	14	B9B1907-DUP1	9020003	L19BS014	NROK R1 2/8/19	1
Sample	15	B9B1907-DUP2	9020003	L19BS015	NROK R2 2/8/19	1
Sample	16	9021412-01	9020003	L19BS016	MAOK D1 2/8/19	1
Sample	17	9021412-02	9020003	L19BS017	MAOK D2 2/8/192	1
Sample	18	B9B1907-DUP3	9020003	L19BS018	MAOK R1 2/8/19	1
Sample	19	B9B1907-DUP4	9020003	L19BS019	MAOK R2 2/8/19	1
Sample	20	9021401-05	9020003	L19BS020	WILLOW POND PARK 2/12/19	1
Sample	21	9021401-06	9020003	L19BS021	WATER TOWER 2/12/19	1
Sample	22	9021401-07	9020003	L19BS022	WEST NEIGHBORHOOD 2/11/19	1
Sample	23	9021401-08	9020003	L19BS023	HINSDALE S. HS 2/12/19	1
Sample	24	9021401-09	9020003	L19BS024	EPA WB WAREHOUSE 2/12/19	1
Sample	100	OFF	FIDOFF	OFF	OFF	1

2-20-19

Compounds other than ethylene oxide were not quantitated.

----------SEQUENCE TABLE ----------

Sequence Name: C:\Smart\L19BS.SEQ
Date: 02-20-2019
Time: 10:02:59
Int. Std Volume: 80 cc

Sample Name	Inlet #	Auto Pos	Samp Vol.	Cal Std Vol.	Method	Time
BFB	1	1	0	0	C:\Smart\BFB.MPT	12:00
-CCV1 NOT USED	2	1	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
1902049-CCV1	2	1	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
B9B1908-CCV1	1	1	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
FLUSH	1	2	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
B9B1907-BLK1	1	3	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9020518-01	1	2	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9020704-01	1	5	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9020703-01	1	6	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9020710-01	1	3	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9020711-01	1	4	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9021222-01	1	7	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9021222-02	1	8	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
B9B1907-DUP1	1	7	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
B9B1907-DUP2	1	8	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9021412-01	1	9	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9021412-02	1	10	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
B9B1907-DUP3	1	9	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
B9B1907-DUP4	1	10	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9021401-05	1	11	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9021401-06	1	12	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9021401-07	1	13	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9021401-08	1	14	250	0	C:\Smart\TO-15A_MS1.MPT	12:00
9021401-09	1	15	250	0	C:\Smart\TO-15A_MS1.MPT	12:00

2-20-19

Compounds other than ethylene oxide were not quantitated.

---------- Leak Check Report ----------

2/20/2019 10:27:20 AM
Leak Check for C:\Smart\L19BS.SEQ
Report File: C:\Smart\L19BS.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 20
Equilibration time(sec) 20
Maintanance time(sec) 60

Sample Inlet	Auto1	Auto2	Auto3	Start	End	Rate(psi/min)
1	5	---	---	1.2	1.2	0.00
1	6	---	---	1.1	1.2	0.10
1	3	---	---	1.2	1.2	0.00
1	4	---	---	1.2	1.2	0.00
1	7	---	---	1.1	1.2	0.10
1	8	---	---	1.1	1.2	0.10
1	9	---	---	1.1	1.2	0.10
1	10	---	---	1.1	1.2	0.10
1	11	---	---	1.1	1.2	0.10
1	12	---	---	1.2	1.3	0.10
1	13	---	---	1.2	1.2	0.00
1	14	---	---	1.2	1.2	0.00
1	15	---	---	1.2	1.2	0.00

2-20-19

Compounds other than ethylene oxide were not quantitated.

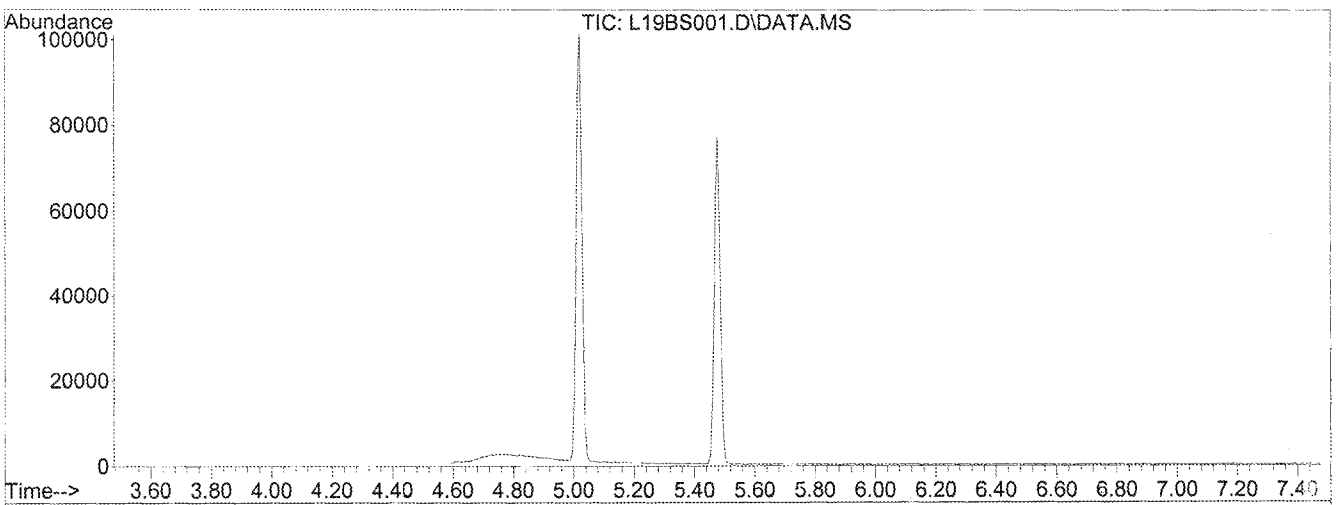
BFB

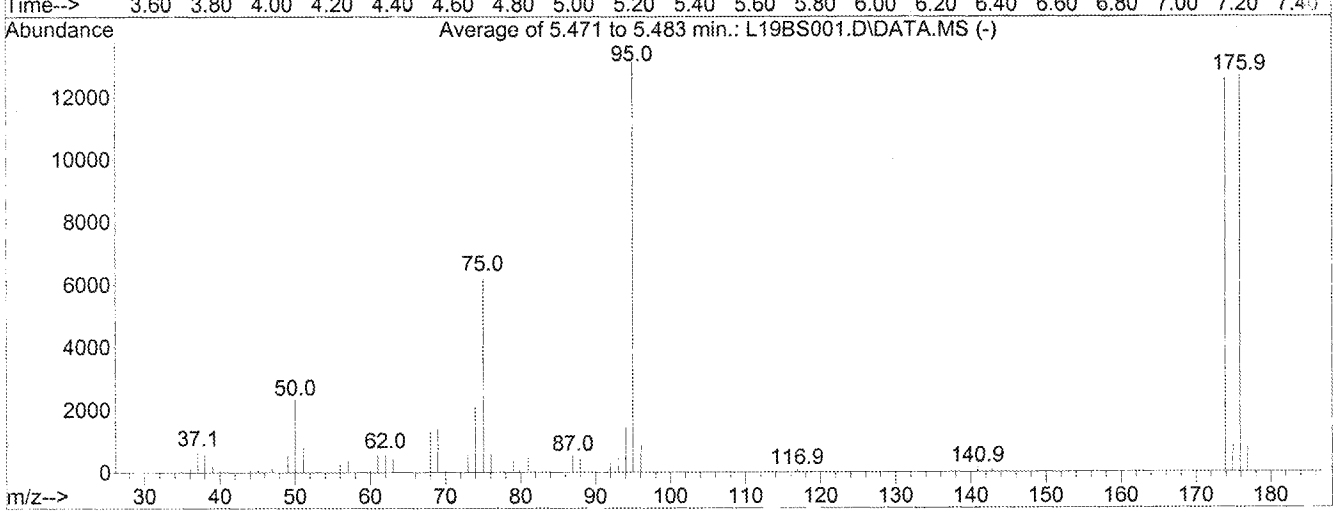
Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS001.D
Acq On : 19 Feb 2019 10:52 am
Operator : MAH
Sample : BFB
Misc : 80 ML 8L13001
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

2-20-19

Method : C:\msdchem\1\METHODS\9020003.M
Title : TO-15 by Selective Ion Analysis
Last Update : Wed Feb 13 06:44:42 2019





AutoFind: Scans 145, 146, 147; Background Corrected with Scan 138

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	17.7	2323	PASS
75	95	30	66	47.8	6278	PASS
95	95	100	100	100.0	13129	PASS
96	95	5	9	6.6	861	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	96.0	12607	PASS
175	174	4	9	7.0	884	PASS
176	174	93	101	100.5	12675	PASS
177	176	5	9	6.4	807	PASS

Compounds other than ethylene oxide were not quantitated.

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\L19BS\L19BS001.D
Tune Time : 19 Feb 2019 10:52 am

9020003	IS Avg Area	48611	118146	86564
	+40%	68055	165404	121190
	-40%	29167	70888	51939

Internal Standard Responses

L19BS003.D				
	1902049-CCV1	58418	145387	101487
L19BS006.D				
	B9B1907-BLK1	49101	125398	89178
L19BS007.D				
	9020518-01	44547	111455	80621
L19BS008.D				
	9020704-01	41387	100402	72867
L19BS009.D				
	9020703-01	41323	99034	74095
L19BS010.D				
	9020710-01	43991	105903	75671
L19BS011.D				
	9020711-01	43229	101723	74750
L19BS012.D				
	9021222-01	41369	99911	69659
L19BS013.D				
	9021222-02	44849	111549	76058
L19BS014.D				
	B9B1907-DUP1	42942	100808	70251
L19BS015.D				
	B9B1907-DUP2	45775	115777	78670
L19BS016.D				
	9021412-01	41621	101748	74991
L19BS017.D				
	9021412-02	44158	112592	77099
L19BS018.D				
	B9B1907-DUP3	40785	98756	71677
L19BS019.D				
	B9B1907-DUP4	44165	112563	74697
L19BS020.D				
	9021401-05	41375	104883	74759
L19BS021.D				
	9021401-06	36838	88713	68123
L19BS022.D				
	9021401-07	42159	105412	74529
L19BS023.D				
	9021401-08	40075	100911	75885
L19BS024.D				
	9021401-09	40994	101669	73090

(#ls) - fails 24hr time check * - fails criteria

Created: Wed Feb 20 13:56:50 2019 MS1

2-20-19

Compounds other than ethylene oxide were not quantitated.

Compound Name			IS-Hexane-d14	IS-Hexane-d14	IS-Difluorobenzene	IS-Difluorobenzene	IS-Chlorobenzene-d5	IS-Chlorobenzene-d5
Labels	Date Acquired	Data File Name	(# 1) Target Response	(# 1) Ret Time	(# 28) Target Response	(# 28) Ret Time	(# 42) Target Response	(# 42) Ret Time
	2/20/2019 10:01	L19BS024.D	40994	19.97	101669	23.13	73090	30.09
Format 1 (Yes/No)								
Format 1 Title								
Format 2 (Yes/No)			YES	YES	YES	YES	YES	YES
Format 2 Title								
Show X Axis Title			YES	YES	YES	YES	YES	YES
Show Y Axis Title								
Lines To Chart								

Start of Data	Format 1 X-axis	Format 2 X-axis	IS-Hexane-d14	% Rec	RT	DEV (min)	IS-Difluorobenzene	% Rec	RT	DEV (min)	IS-Chlorobenzene-d5	% Rec	RT	DEV (min)
		IS AVG / AVG RT	**48611**		**19.99**		**118146**		**23.15**		**86564**		**30.11**	
	2/19/2019 12:44	L19BS003.D	58418	120	19.97	-0.02	145387	123	23.13	-0.02	101487	117	30.08	-0.03
	2/19/2019 15:41	L19BS006.D	49101	101	19.97	-0.02	125398	106	23.13	-0.02	89178	103	30.08	-0.03
	2/19/2019 16:38	L19BS007.D	44547	92	19.97	-0.02	111455	94	23.13	-0.02	80621	93	30.09	-0.02
	2/19/2019 17:40	L19BS008.D	41387	85	19.97	-0.02	100402	85	23.13	-0.02	72867	84	30.08	-0.03
	2/19/2019 18:42	L19BS009.D	41323	85	19.97	-0.02	99034	84	23.13	-0.02	74095	86	30.10	-0.01
	2/19/2019 19:45	L19BS010.D	43991	90	19.97	-0.02	105903	90	23.13	-0.02	75671	87	30.08	-0.03
	2/19/2019 20:47	L19BS011.D	43229	89	19.97	-0.02	101723	86	23.13	-0.02	74750	86	30.10	-0.01
	2/19/2019 21:49	L19BS012.D	41369	85	19.97	-0.02	99911	85	23.13	-0.02	69659	80	30.10	-0.01
	2/19/2019 22:49	L19BS013.D	44849	92	19.97	-0.02	111549	94	23.13	-0.02	76058	88	30.08	-0.03
	2/19/2019 23:52	L19BS014.D	42942	88	19.97	-0.02	100808	85	23.13	-0.02	70251	81	30.10	-0.01
	2/20/2019 12:52	L19BS015.D	45775	94	19.97	-0.02	115777	98	23.13	-0.02	78670	91	30.08	-0.03
	2/20/2019 1:54	L19BS016.D	41621	86	19.97	-0.02	101748	86	23.13	-0.02	74991	87	30.09	-0.02
	2/20/2019 2:54	L19BS017.D	44158	91	19.97	-0.02	112592	95	23.13	-0.02	77099	89	30.10	-0.01
	2/20/2019 3:56	L19BS018.D	40785	84	19.97	-0.02	98756	84	23.13	-0.02	71677	83	30.10	-0.01
	2/20/2019 4:57	L19BS019.D	44165	91	19.97	-0.02	112563	95	23.13	-0.02	74697	86	30.10	-0.01
	2/20/2019 5:57	L19BS020.D	41375	85	19.97	-0.02	104883	89	23.13	-0.02	74759	86	30.10	-0.01
	2/20/2019 6:59	L19BS021.D	36838	76	19.97	-0.02	88713	75	23.15	0	68123	79	30.10	-0.01
	2/20/2019 7:59	L19BS022.D	42159	87	19.97	-0.02	105412	89	23.13	-0.02	74529	86	30.10	-0.01
	2/20/2019 8:59	L19BS023.D	40075	82	19.97	-0.02	100911	85	23.13	-0.02	75885	88	30.10	-0.01
	2/20/2019 10:01	L19BS024.D	40994	84	19.97	-0.02	101669	86	23.13	-0.02	73090	84	30.09	-0.02

7-20-19

Compounds other than ethylene oxide were not quantitated.

Analytical Standard Record
Eastern Research Group
9B12008

Description:	2.50 ppbv ICV/CCV	Expires:	03/14/19
Standard Type:	Calibration Stan	Prepared:	02/12/19
Solvent:	Scientific Air	Prepared By:	Mitch Howell
Final Volume (mls):	6000	Department:	Air Toxics
Vials:	1	Last Edit:	02/12/19 08:47 by MH

canister# 3224

Analyte	CAS Number	Concentration	Units
1,1,1-Trichloroethane	71-55-6	0.00247	ppmv
1,1,2,2-Tetrachloroethane	79-34-5	0.00253	ppmv
1,1,2-Trichloroethane	79-00-5	0.00248	ppmv
1,1-Dichloroethane	75-34-3	0.00243	ppmv
1,1-Dichloroethene	75-35-4	0.00244	ppmv
1,2,4-Trichlorobenzene	120-82-1	0.00248	ppmv
1,2,4-Trimethylbenzene	95-63-6	0.00238	ppmv
1,2-Dibromoethane	106-93-4	0.0025	ppmv
1,2-Dichloroethane	107-06-2	0.00249	ppmv
1,2-Dichloropropane	78-87-5	0.00253	ppmv
1,3,5-Trimethylbenzene	108-67-8	0.00252	ppmv
1,3-Butadiene	106-99-0	0.00247	ppmv
Acetonitrile	75-05-8	0.00253	ppmv
Acetylene	74-86-2	0.0024	ppmv
Acrolein	107-02-8	0.00242	ppmv
Acrylonitrile	107-13-1	0.0025	ppmv
Benzene	71-43-2	0.00251	ppmv
Bromochloromethane	74-97-5	0.00247	ppmv
Bromodichloromethane	75-27-4	0.00256	ppmv
Bromoform	75-25-2	0.00254	ppmv
Bromomethane	74-83-9	0.0025	ppmv
Carbon Disulfide	75-15-0	0.00248	ppmv
Carbon Tetrachloride	56-23-5	0.00252	ppmv
Chlorobenzene	108-90-7	0.00246	ppmv
Chloroethane	75-00-3	0.0025	ppmv
Chloroform	67-66-3	0.0025	ppmv
Chloromethane	74-87-3	0.00248	ppmv
Chloroprene	126-99-8	0.00248	ppmv
cis-1,2-Dichloroethylene	156-59-2	0.0025	ppmv
cis-1,3-Dichloropropene	10061-01-5	0.00254	ppmv

Reviewed By 2-20-19 Date

Compounds other than ethylene oxide were not quantitated.

Analytical Standard Record
Eastern Research Group
9B12008

Dibromochloromethane	124-48-1	0.00254	ppmv
Dichlorodifluoromethane	75-71-8	0.00238	ppmv
Dichloromethane	75-09-2	0.00248	ppmv
Dichlorotetrafluoroethane	76-14-2	0.00244	ppmv
Ethyl Acrylate	140-88-5	0.00254	ppmv
Ethyl tert-Butyl Ether	637-92-3	0.00257	ppmv
Ethylbenzene	100-41-4	0.0025	ppmv
Ethylene oxide	75-21-8	0.0025	ppmv
Hexachloro-1,3-butadiene	87-68-3	0.0025	ppmv
m,p-Xylene	108-38-3, 106-42-3	0.00498	ppmv
m-Dichlorobenzene	541-73-1	0.0024	ppmv
Methyl Isobutyl Ketone	108-10-1	0.00253	ppmv
Methyl Methacrylate	80-62-6	0.00254	ppmv
Methyl tert-Butyl Ether	1634-04-4	0.00254	ppmv
Naphthalene	91-20-3	0.00246	ppmv
n-Hexane	110-54-3	0.0025	ppmv
n-Octane	111-65-9	0.00252	ppmv
o-Dichlorobenzene	95-50-1	0.0025	ppmv
o-Xylene	95-47-6	0.00244	ppmv
p-Dichlorobenzene	106-46-7	0.00261	ppmv
Propylene	115-07-1	0.00245	ppmv
Styrene	100-42-5	0.0025	ppmv
tert-Amyl Methyl Ether	994-05-8	0.0026	ppmv
Tetrachloroethylene	127-18-4	0.00249	ppmv
Toluene	108-88-3	0.00244	ppmv
trans-1,2-Dichloroethylene	156-60-5	0.00246	ppmv
trans-1,3-Dichloropropene	10061-02-6	0.00246	ppmv
Trichloroethylene	79-01-6	0.00252	ppmv
Trichlorofluoromethane	75-69-4	0.0025	ppmv
Trichlorotrifluoroethane	76-13-1	0.00244	ppmv
Vinyl chloride	75-01-4	0.0025	ppmv

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
8J25001	TO-15 Secondary Stock Standard	10/25/18	** Vendor **	10/04/19	11/20/18 11:30 by RMB	30
8K20015	Ethylene Oxide Secondary Stock St	11/12/18	** Vendor **	11/12/19	11/20/18 12:14 by MH	15

Reviewed By 1-7-19 Date

Compounds other than ethylene oxide were not quantitated.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS003.D
Acq On : 19 Feb 2019 12:44 pm
Operator : MAH
Sample : 1902049-CCV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 13:51:54 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

2-20-19

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISS	IS-Hexane-d14	1.000	1.000	0.0	100	0.00
2	CT	Acetylene	0.391	0.375	4.1	100	0.00
3	CT	Propylene	0.487	0.491	-0.8	100	0.00
4	CT	Dichlorodifluoromethane	2.300	2.181	5.2	100	0.00
5	CT	Chloromethane	0.592	0.533	10.0	100	0.00
6	CT	Dichlorotetrafluoroethane	2.013	2.068	-2.7	100	0.00
7	CT	Vinyl Chloride	0.662	0.604	8.8	100	0.00
8	CT	1,3-Butadiene	0.450	0.408	9.3	100	0.00
9	CT	Ethylene oxide	0.273	0.251	8.1	100	0.00
10	CT	Bromomethane	0.627	0.568	9.4	100	0.00
11	CT	Chloroethane	0.263	0.228	13.3	100	0.00
12	CT	Acetonitrile	0.414	0.338	18.4	100	0.00
13	CT	Acrolein	0.209	0.179	14.4	100	0.00
14	CT	Trichlorofluoromethane	1.944	1.581	18.7	100	0.00
15	CT	Acrylonitrile	0.330	0.285	13.6	100	0.00
16	CT	1,1-Dichloroethene	0.843	0.817	3.1	100	0.00
17	CT	Methylene Chloride	0.557	0.498	10.6	100	0.00
18	CT	Carbon Disulfide	1.716	1.532	10.7	100	0.00
19	CT	Trichlorotrifluoroethane	1.307	1.211	7.3	100	0.00
20	CT	trans-1,2-Dichloroethylene	0.467	0.417	10.7	100	0.00
21	CT	1,1-Dichloroethane	0.786	0.724	7.9	100	0.00
22	CT	Methyl tert-Butyl Ether	1.318	1.171	11.2	100	0.00
23	CT	Chloroprene	0.639	0.597	6.6	100	0.00
24	CT	cis-1,2-Dichloroethylene	0.620	0.550	11.3	100	0.00
25	CT	Bromochloromethane	0.335	0.290	13.4	100	0.00
26	CT	Chloroform	0.912	0.864	5.3	100	0.00
27	CT	Ethyl tert-Butyl Ether	1.260	1.155	8.3	100	0.00
28	CT	1,2-Dichloroethane	0.560	0.531	5.2	100	0.00
29	ISS	IS-1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
30	CT	1,1,1-Trichloroethane	0.370	0.316	14.6	100	0.00
31	CT	Benzene	0.529	0.505	4.5	100	0.00
32	CT	Carbon Tetrachloride	0.396	0.370	6.6	100	0.00
33	CT	tert-Amyl Methyl Ether	0.449	0.404	10.0	100	0.00
34	CT	1,2-Dichloropropane	0.201	0.184	8.5	100	0.00
35	CT	Ethyl Acrylate	0.171	0.159	7.0	100	0.00
36	CT	Bromodichloromethane	0.356	0.288	19.1	100	0.00
37	CT	Trichloroethylene	0.252	0.213	15.5	100	0.00
38	CT	Methyl Methacrylate	0.513	0.464	9.6	100	0.00
39	CT	cis-1,3-Dichloropropene	0.175	0.181	-3.4	100	0.00
40	CT	Methyl Isobutyl Ketone	0.377	0.332	11.9	100	0.00
41	CT	trans-1,3-Dichloropropene	0.117	0.117	0.0	100	0.00
42	CT	1,1,2-Trichloroethane	0.184	0.169	8.2	100	0.00
43	ISS	IS-Chlorobenzene-d5	1.000	1.000	0.0	100	0.00
44	CT	Toluene	0.779	0.773	0.8	100	0.00
45	CT	Dibromochloromethane	1.529	1.398	8.6	100	0.00
46	CT	1,2-Dibromoethane	0.292	0.299	-2.4	100	0.00
47	CT	n-Octane	0.469	0.441	6.0	100	0.00
48	CT	Tetrachloroethylene	0.375	0.359	4.3	100	0.00

Compounds other than ethylene oxide were not quantitated.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS003.D
Acq On : 19 Feb 2019 12:44 pm
Operator : MAH
Sample : 1902049-CCV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 13:51:54 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
Last Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.30min
Max. RRF Dev : 30% Max. Rel. Area : 140%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	CT	Chlorobenzene	0.497	0.479	3.6	100	0.00
50	CT	Ethylbenzene	0.819	0.802	2.1	100	0.00
51	CT	m,p-Xylene	0.691	0.652	5.6	100	0.00
52	CT	Bromoform	0.296	0.274	7.4	100	0.00
53	CT	Styrene	0.392	0.372	5.1	100	0.00
54	CT	1,1,2,2-Tetrachloroethane	0.446	0.420	5.8	100	0.00
55	CT	o-Xylene	0.682	0.668	2.1	100	0.00
56	CT	1,3,5-Trimethylbenzene	0.732	0.694	5.2	100	0.00
57	CT	1,2,4-Trimethylbenzene	0.633	0.613	3.2	100	0.00
58	CT	m-Dichlorobenzene	0.333	0.301	9.6	100	0.00
59	CT	p-Dichlorobenzene	0.271	0.272	-0.4	100	0.00
60	CT	o-Dichlorobenzene	0.305	0.293	3.9	100	0.00
61	CT	1,2,4-Trichlorobenzene	0.103	0.107	-3.9	100	0.00
62	CT	Hexachloro-1,3-butadiene	0.264	0.245	7.2	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS003.D
Acq On : 19 Feb 2019 12:44 pm
Operator : MAH
Sample : 1902049-CCV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 13:51:54 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

2-20-19

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) IS-Hexane-d14	19.970	66	58418	4.7700	ppbv	-0.02
29) IS-1,4-Difluorobenzene	23.130	114	145387	4.9900	ppbv	-0.02
43) IS-Chlorobenzene-d5	30.078	117	101487	4.7400	ppbv	-0.04

System Monitoring Compounds

Target Compounds						Qvalue
2) Acetylene	5.400	26	11022	2.3040	ppbv	100
3) Propylene	7.823	41	14731	2.4685	ppbv	100
4) Dichlorodifluoromethane	8.685	85	63560	2.2561	ppbv	100
5) Chloromethane	9.740	50	16177	2.2301	ppbv	100
6) Dichlorotetrafluoroethane	10.847	85	61792	2.5059	ppbv	100
7) Vinyl Chloride	11.102	62	18491	2.2791	ppbv	100
8) 1,3-Butadiene	11.783	54	12343	2.2379	ppbv	99
9) Ethylene oxide	12.380	29	7692	2.3021	ppbv	99
10) Bromomethane	12.590	94	17402	2.2666	ppbv	99
11) Chloroethane	13.268	64	6978	2.1649	ppbv	99
12) Acetonitrile	14.358	41	10479	2.0669	ppbv	100
13) Acrolein	14.613	56	5296	2.0730	ppbv	98
14) Trichlorofluoromethane	15.193	101	48415	2.0338	ppbv	100
15) Acrylonitrile	15.935	53	8738	2.1600	ppbv	99
16) 1,1-Dichloroethene	16.422	61	24410	2.3636	ppbv	100
17) Methylene Chloride	16.723	49	15134	2.2180	ppbv	98
18) Carbon Disulfide	16.932	76	46516	2.2135	ppbv	100
19) Trichlorotrifluoroethane	17.280	101	36182	2.2600	ppbv	99
20) trans-1,2-Dichloroethy...	18.315	96	12576	2.1969	ppbv	100
21) 1,1-Dichloroethane	18.632	63	21539	2.2384	ppbv	100
22) Methyl tert-Butyl Ether	18.791	73	36415	2.2564	ppbv	99
23) Chloroprene	19.539	53	18122	2.3153	ppbv	99
24) cis-1,2-Dichloroethylene	19.947	61	16826	2.2148	ppbv	99
25) Bromochloromethane	20.174	128	8787	2.1397	ppbv	99
26) Chloroform	20.401	83	26447	2.3688	ppbv	99
27) Ethyl tert-Butyl Ether	21.164	59	36369	2.3563	ppbv	100
28) 1,2-Dichloroethane	21.478	62	16193	2.3630	ppbv	100
30) 1,1,1-Trichloroethane	21.850	97	22716	2.1078	ppbv	98
31) Benzene	22.535	78	36955	2.3978	ppbv	100
32) Carbon Tetrachloride	22.770	117	27191	2.3556	ppbv	100
33) tert-Amyl Methyl Ether	23.501	73	30608	2.3386	ppbv	100
34) 1,2-Dichloropropane	23.769	63	13553	2.3131	ppbv	100
35) Ethyl Acrylate	23.872	55	11773	2.3651	ppbv	100
36) Bromodichloromethane	24.058	83	21467	2.0703	ppbv	100
37) Trichloroethylene	24.161	130	15626	2.1284	ppbv	99
38) Methyl Methacrylate	24.532	41	34329	2.2977	ppbv	100
39) cis-1,3-Dichloropropene	25.511	75	13402	2.6341	ppbv	99
40) Methyl Isobutyl Ketone	25.588	43	24506	2.2312	ppbv	100
41) trans-1,3-Dichloropropene	26.350	75	8394	2.4625	ppbv	98
42) 1,1,2-Trichloroethane	26.598	97	12234	2.2821	ppbv	99
44) Toluene	27.075	91	40396	2.4223	ppbv	100
45) Dibromochloromethane	27.717	129	76006	2.3217	ppbv	100
46) 1,2-Dibromoethane	28.138	107	15979	2.5553	ppbv	100
47) n-Octane	28.857	43	23806	2.3700	ppbv	100
48) Tetrachloroethylene	28.980	166	19125	2.3827	ppbv	100
49) Chlorobenzene	30.173	112	25253	2.3726	ppbv	98
50) Ethylbenzene	30.898	91	42914	2.4475	ppbv	99

Compounds other than ethylene oxide were not quantitated.

Quantification Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS003.D
Acq On : 19 Feb 2019 12:44 pm
Operator : MAH
Sample : 1902049-CCV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 13:51:54 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

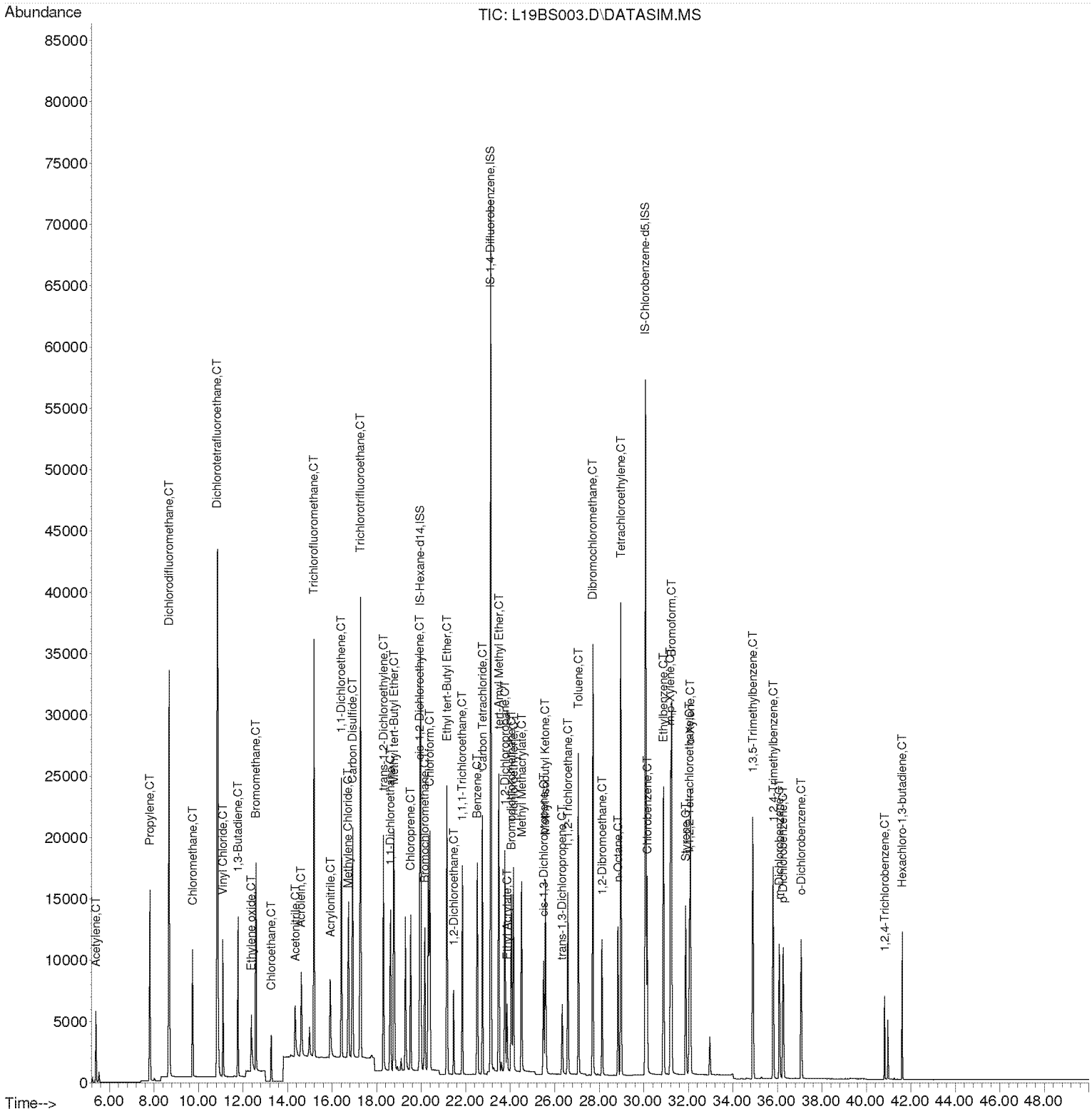
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
51) m,p-Xylene	31.204	91	69546	4.7028	ppbv		100
52) Bromoform	31.261	173	14925	2.3579	ppbv		100
53) Styrene	31.891	104	19925	2.3765	ppbv	#	99
54) 1,1,2,2-Tetrachloroethane	32.063	83	22760	2.3847	ppbv		99
55) o-Xylene	32.101	91	34918	2.3926	ppbv		99
56) 1,3,5-Trimethylbenzene	34.902	105	37443	2.3880	ppbv		99
57) 1,2,4-Trimethylbenzene	35.828	105	31261	2.3053	ppbv		100
58) m-Dichlorobenzene	36.095	146	15452	2.1673	ppbv		99
59) p-Dichlorobenzene	36.273	146	15193	2.6159	ppbv		100
60) o-Dichlorobenzene	37.075	146	15709	2.4090	ppbv		99
61) 1,2,4-Trichlorobenzene	40.827	180	5705	2.5795	ppbv		100
62) Hexachloro-1,3-butadiene	41.621	225	13097	2.3188	ppbv		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

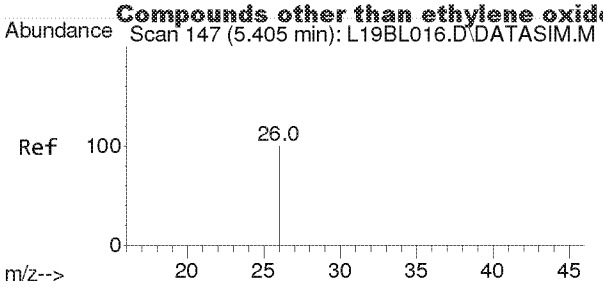
Compounds other than ethylene oxide were not quantitated.

Data Path : Y:\MASS SPEC 1 DATA\L19BS\
Data File : L19BS003.D
Acq On : 19 Feb 2019 12:44 pm
Operator : MAH
Sample : 1902049-CCV1
Misc : 80 ML 8L13001,9B12008
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 20 13:51:53 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

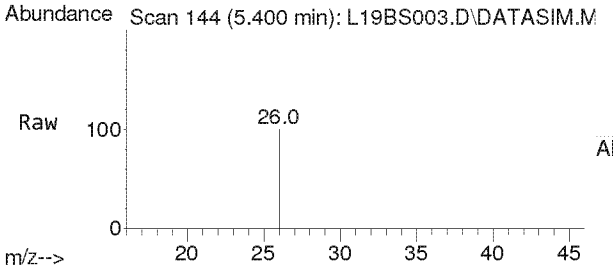


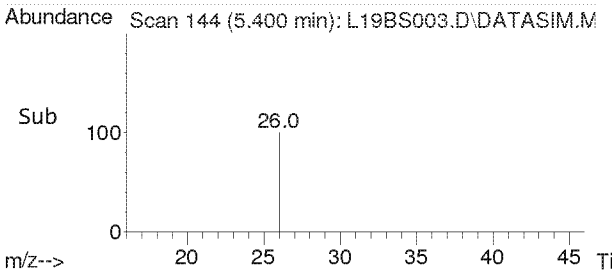
Compounds other than ethylene oxide were not quantitated.

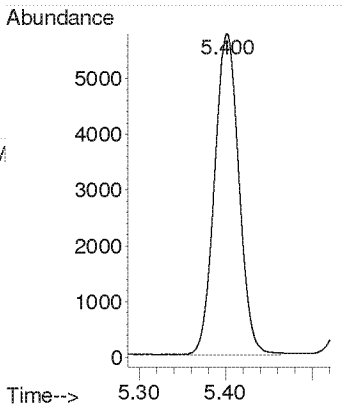


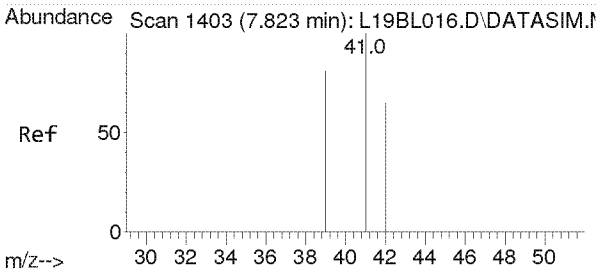
#2
Acetylene
Concen: 2.304 ppbv
RT: 5.400 min Scan# 144
Delta R.T. -0.004 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 26 Resp: 11022





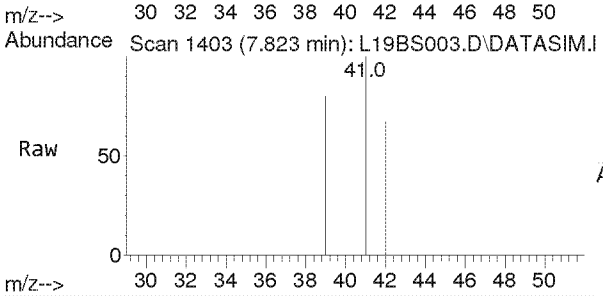


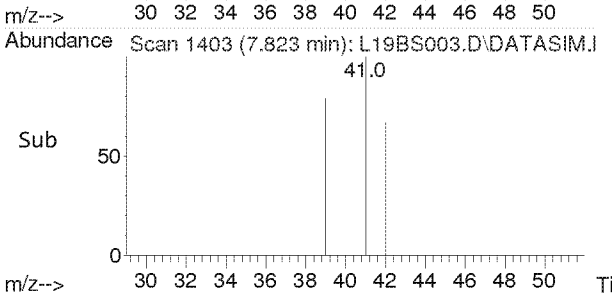


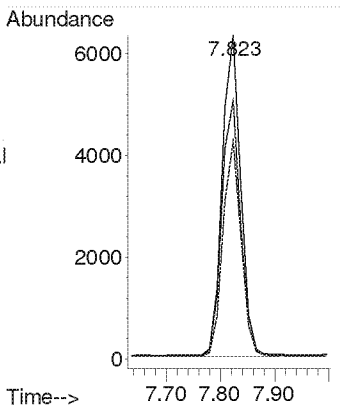
#3
Propylene
Concen: 2.469 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. 0.000 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 41 Resp: 14731

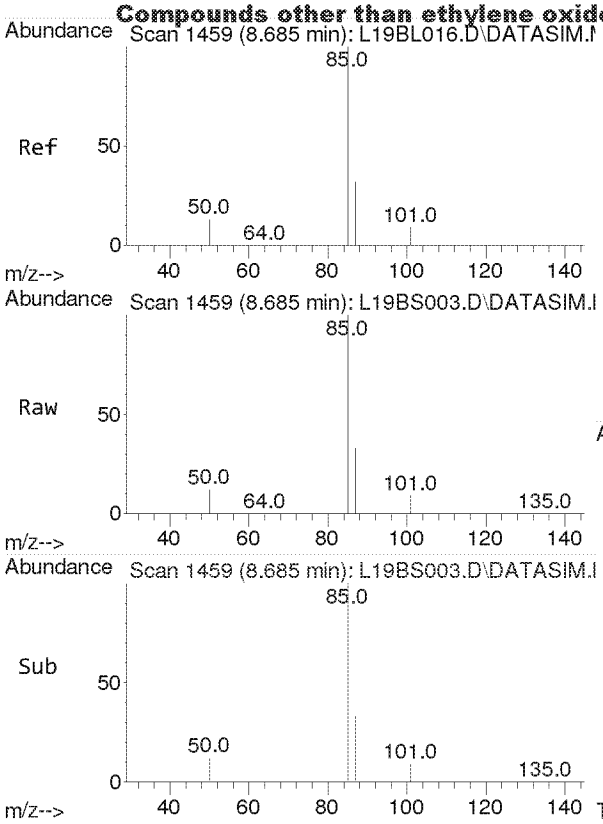
Ion	Ratio	Lower	Upper
41	100		
39	80.1	64.2	96.2
42	66.2	52.6	79.0







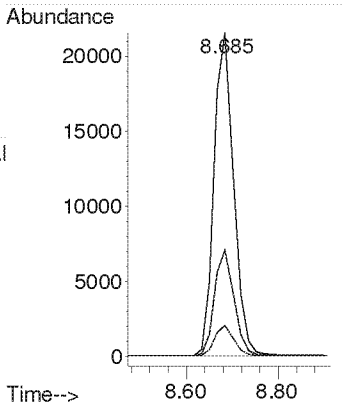
Compounds other than ethylene oxide were not quantitated.

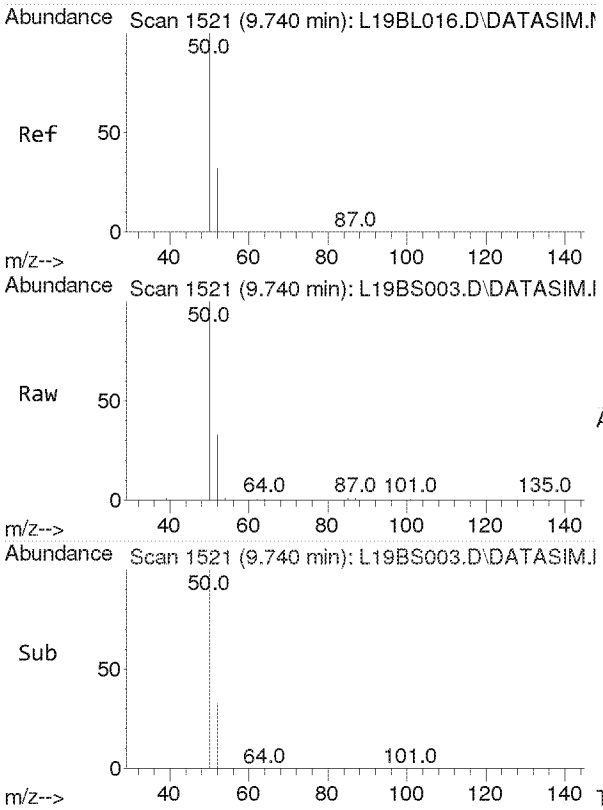


#4
Dichlorodifluoromethane
Concen: 2.256 ppbv
RT: 8.685 min Scan# 1459
Delta R.T. 0.000 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 85 Resp: 63560

Ion	Ratio	Lower	Upper
85	100		
87	32.3	26.0	39.0
101	9.0	7.3	10.9

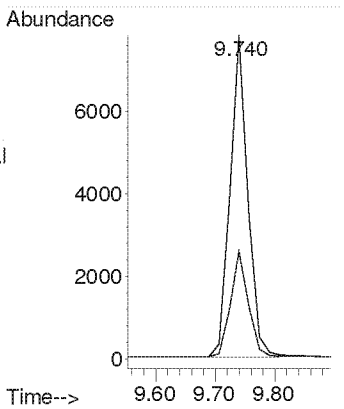




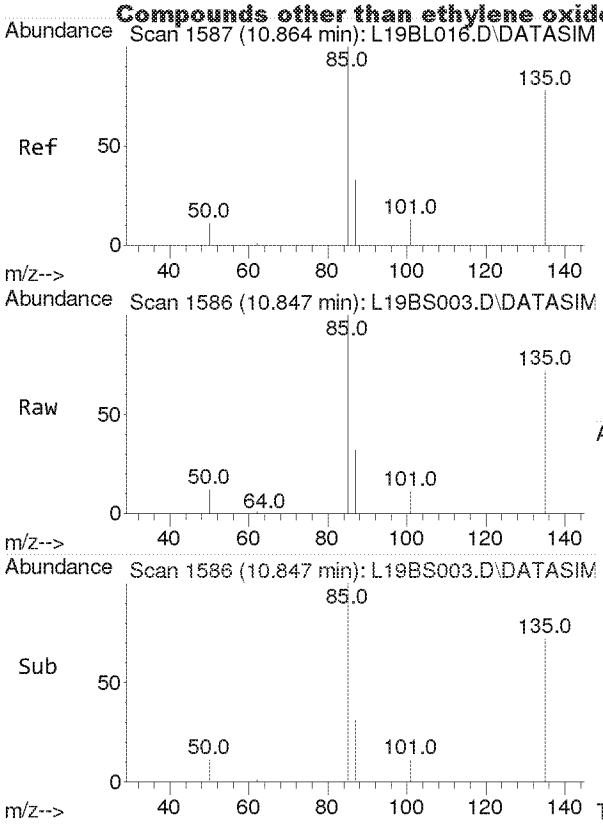
#5
Chloromethane
Concen: 2.230 ppbv
RT: 9.740 min Scan# 1521
Delta R.T. 0.000 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 50 Resp: 16177

Ion	Ratio	Lower	Upper
50	100		
52	32.8	26.1	39.1



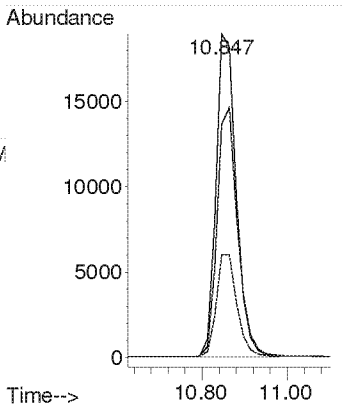
Compounds other than ethylene oxide were not quantitated.

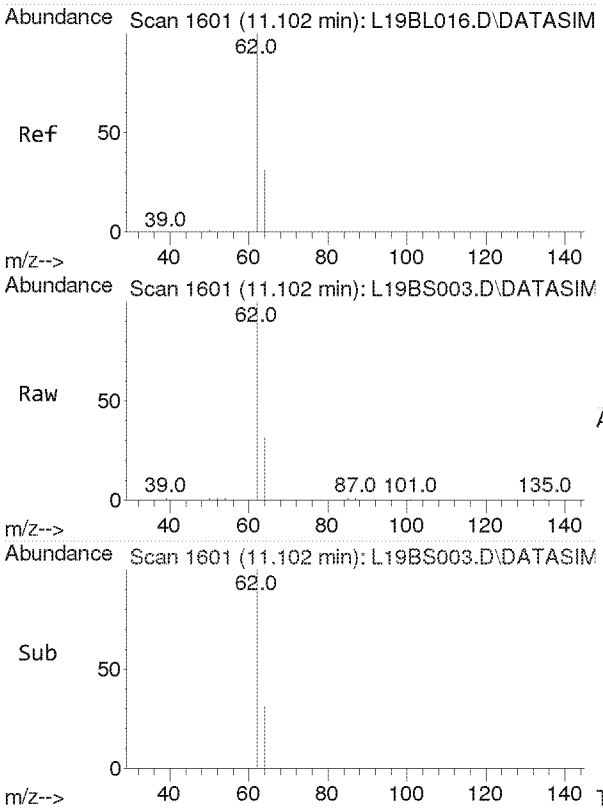


#6
Dichlorotetrafluoroethane
Concen: 2.506 ppbv
RT: 10.847 min Scan# 1586
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 85 Resp: 61792

Ion	Ratio	Lower	Upper
85	100		
135	79.0	63.2	94.8
87	32.2	25.9	38.9

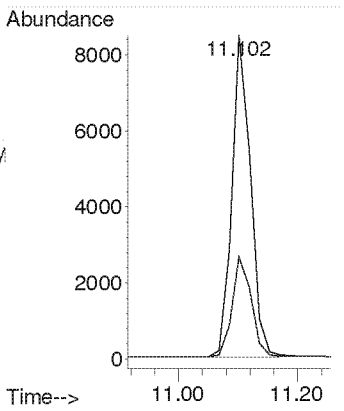




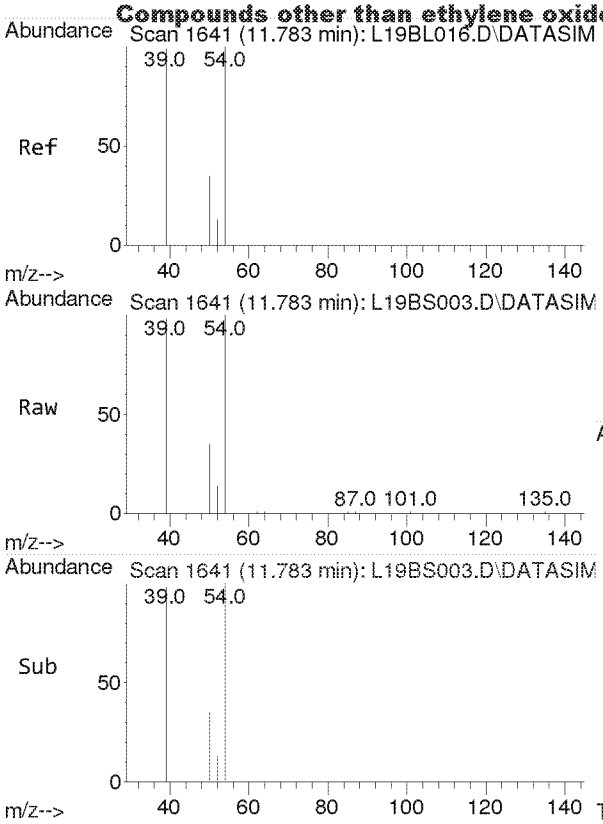
#7
Vinyl Chloride
Concen: 2.279 ppbv
RT: 11.102 min Scan# 1601
Delta R.T. 0.000 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 62 Resp: 18491

Ion	Ratio	Lower	Upper
62	100		
64	31.8	25.4	38.0



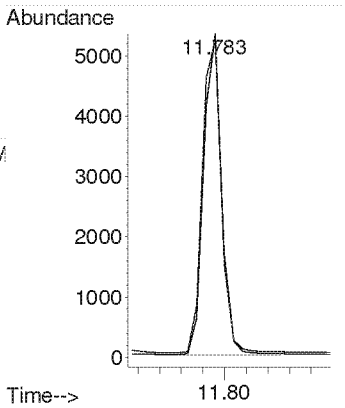
Compounds other than ethylene oxide were not quantitated.

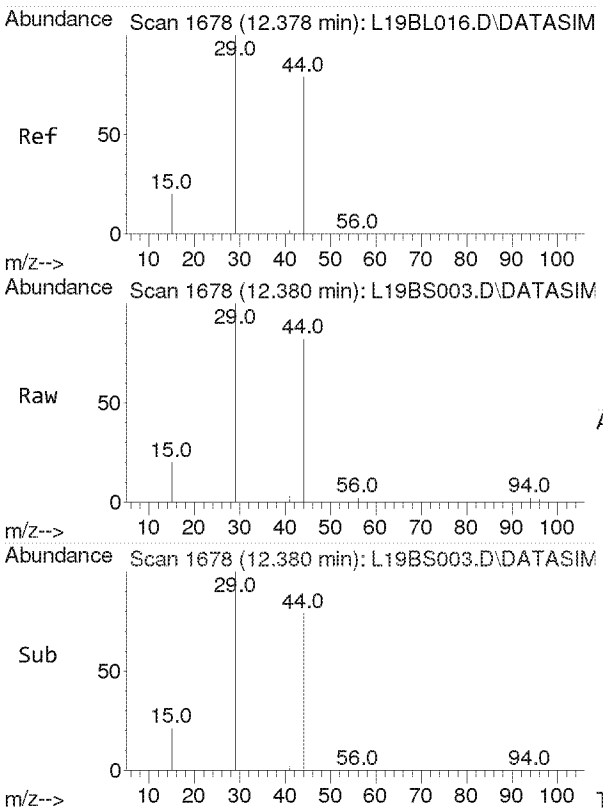


#8
1,3-Butadiene
Concen: 2.238 ppbv
RT: 11.783 min Scan# 1641
Delta R.T. 0.000 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 54 Resp: 12343

Ion	Ratio	Lower	Upper
54	100		
39	102.6	81.6	122.4

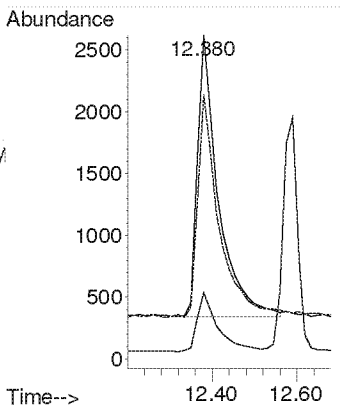




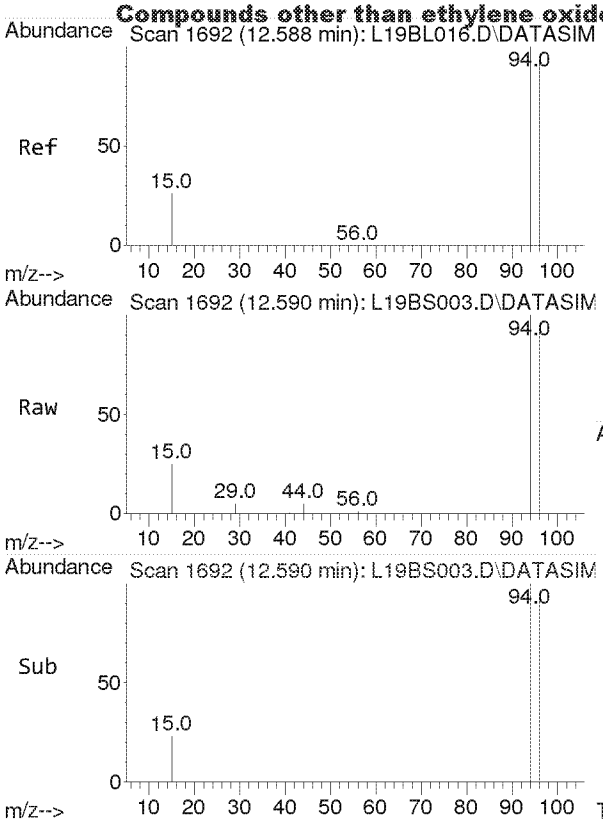
#9
Ethylene oxide
Concen: 2.302 ppbv
RT: 12.380 min Scan# 1678
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 29 Resp: 7692

Ion	Ratio	Lower	Upper
29	100		
15	20.6	16.0	24.0
44	80.9	65.4	98.2



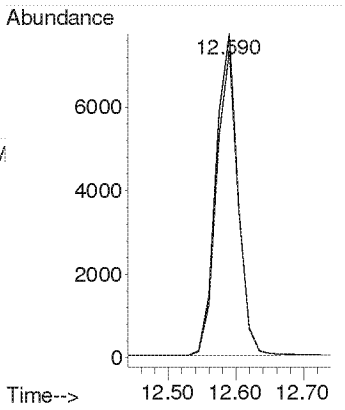
Compounds other than ethylene oxide were not quantitated.

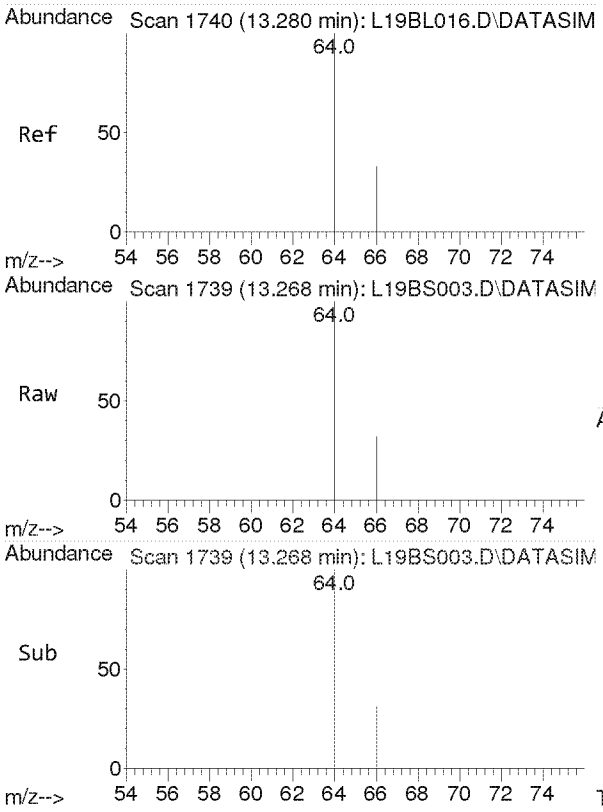


#10
Bromomethane
Concen: 2.267 ppbv
RT: 12.590 min Scan# 1692
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 94 Resp: 17402

Ion	Ratio	Lower	Upper
94	100		
96	93.9	75.5	113.3

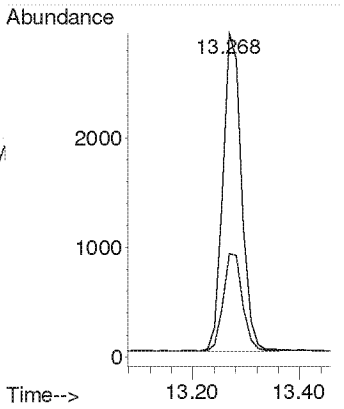




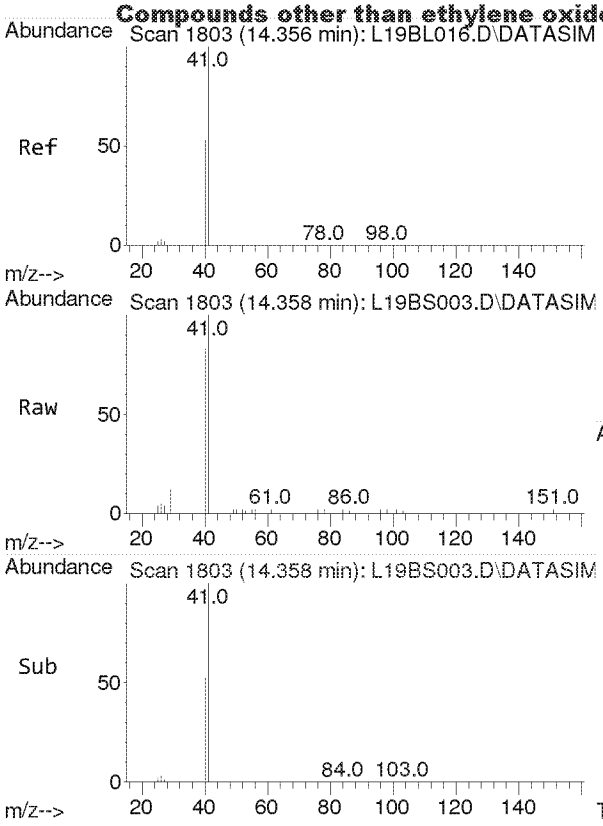
#11
Chloroethane
Concen: 2.165 ppbv
RT: 13.268 min Scan# 1739
Delta R.T. -0.011 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 64 Resp: 6978

Ion	Ratio	Lower	Upper
64	100		
66	31.6	25.8	38.6



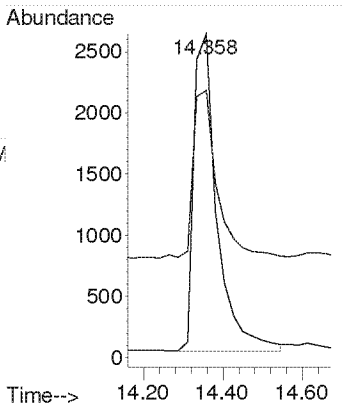
Compounds other than ethylene oxide were not quantitated.

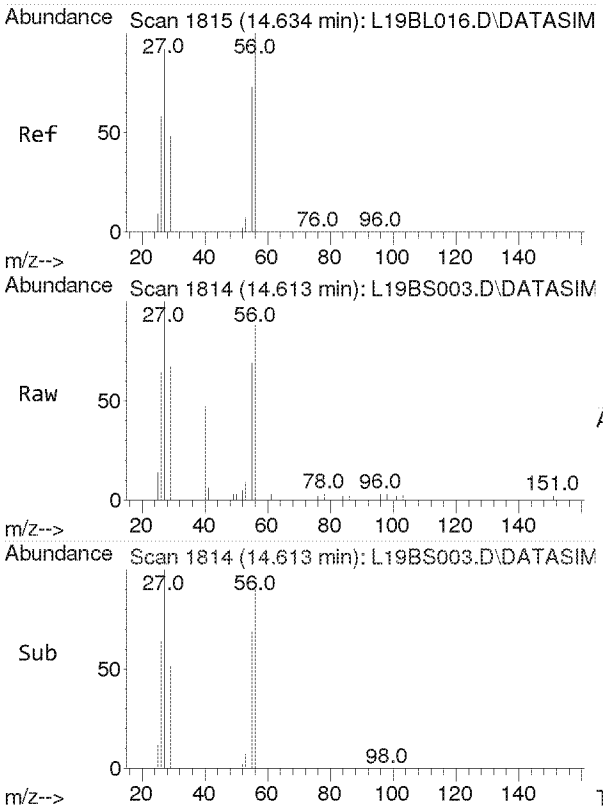


#12
Acetonitrile
Concen: 2.067 ppbv
RT: 14.358 min Scan# 1803
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 41 Resp: 10479

Ion	Ratio	Lower	Upper
41	100		
40	53.0	42.2	63.4

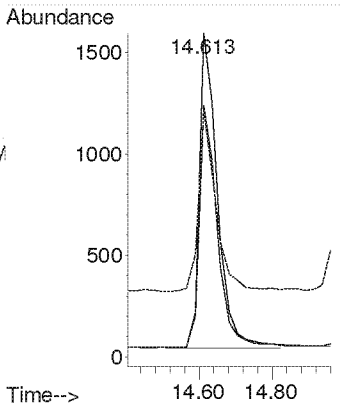




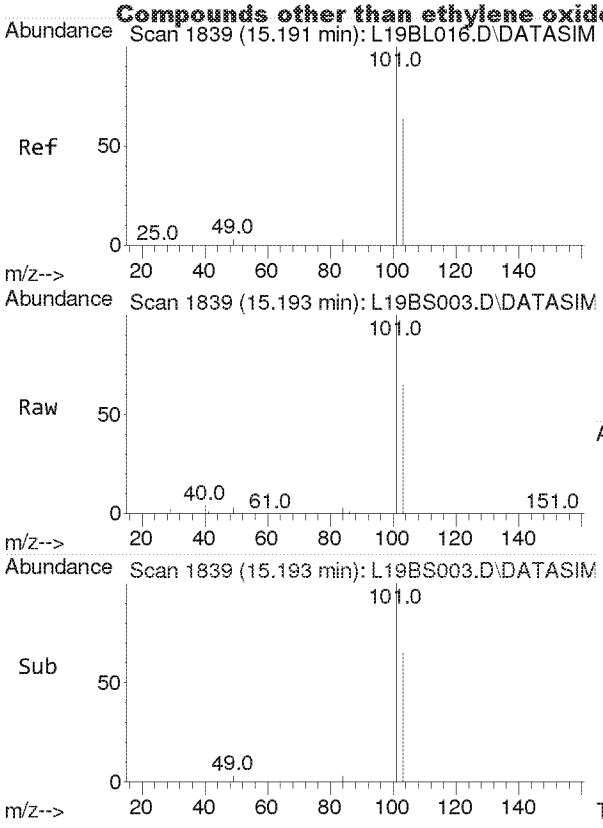
#13
Acrolein
Concen: 2.073 ppbv
RT: 14.613 min Scan# 1814
Delta R.T. -0.021 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 56 Resp: 5296

Ion	Ratio	Lower	Upper
56	100		
55	77.2	60.8	91.2
29	56.0	43.8	65.6



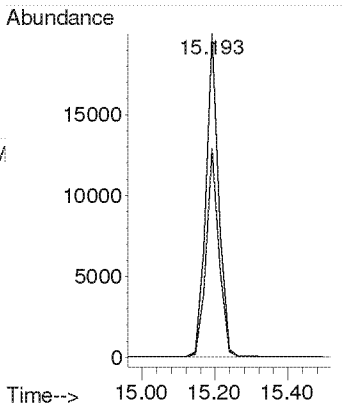
Compounds other than ethylene oxide were not quantitated.

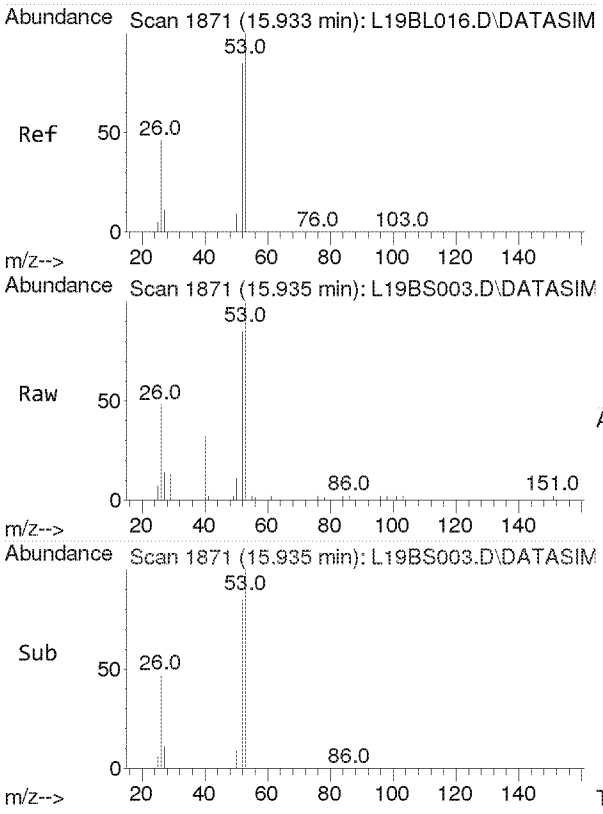


#14
Trichlorofluoromethane
Concen: 2.034 ppbv
RT: 15.193 min Scan# 1839
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:101 Resp: 48415

Ion	Ratio	Lower	Upper
101	100		
103	64.6	51.7	77.5

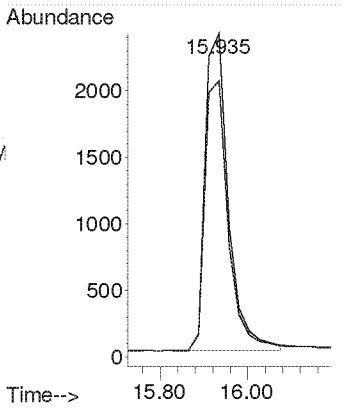




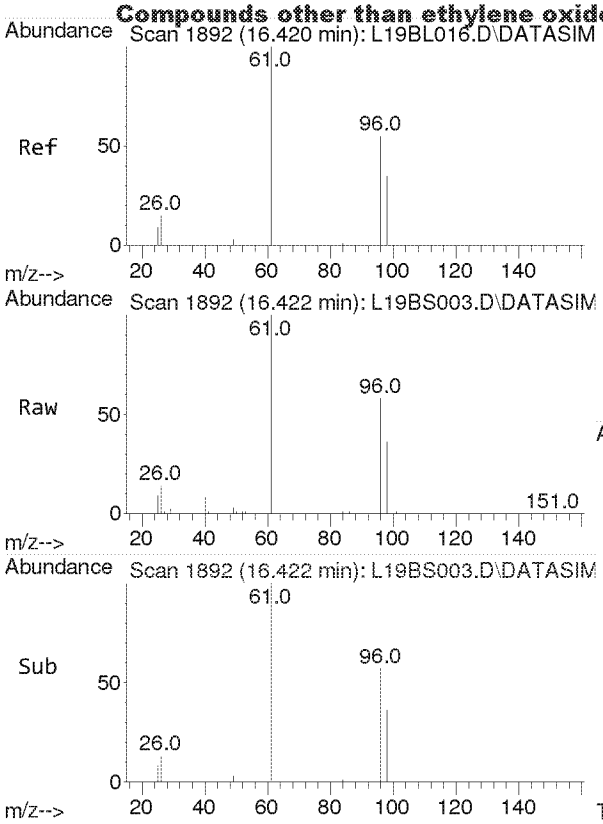
#15
Acrylonitrile
Concen: 2.160 ppbv
RT: 15.935 min Scan# 1871
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 53 Resp: 8738

Ion	Ratio	Lower	Upper
53	100		
52	86.2	69.5	104.3



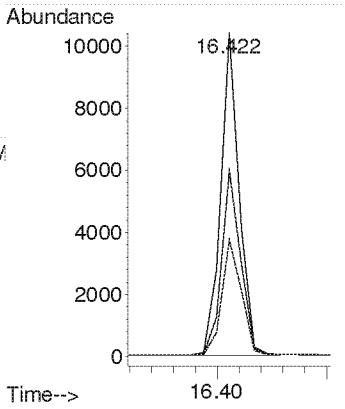
Compounds other than ethylene oxide were not quantitated.

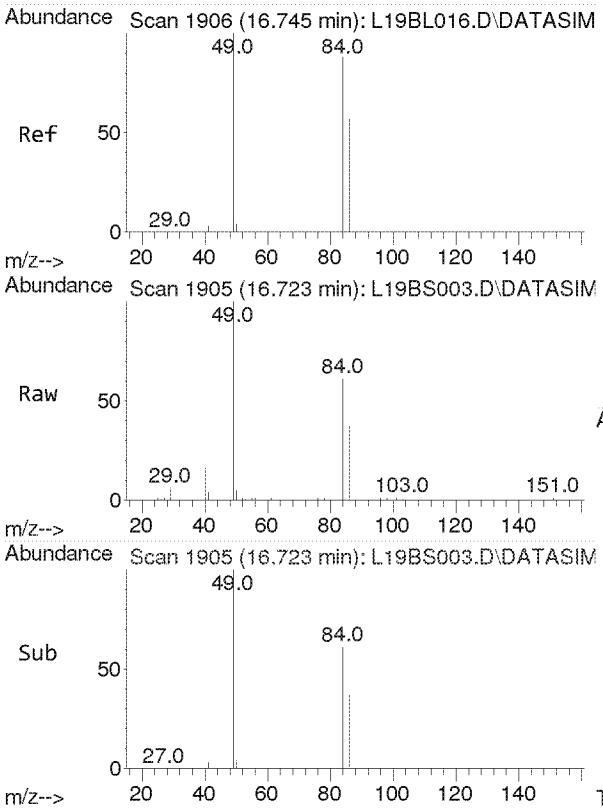


#16
1,1-Dichloroethene
Concen: 2.364 ppbv
RT: 16.422 min Scan# 1892
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 61 Resp: 24410

Ion	Ratio	Lower	Upper
61	100		
96	59.0	47.3	70.9
98	38.0	30.6	45.8

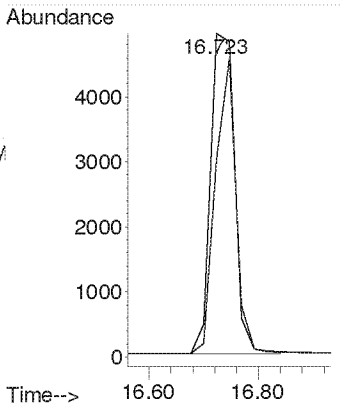




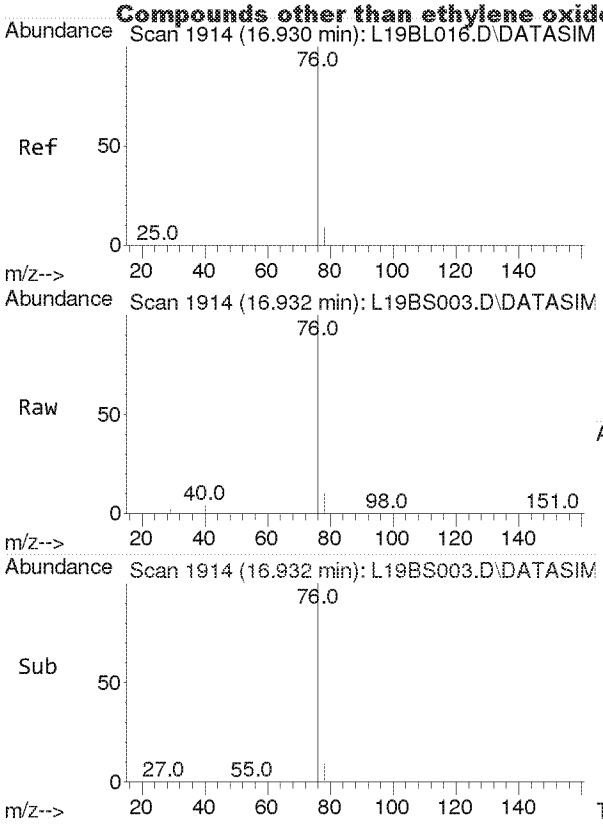
#17
Methylene Chloride
Concen: 2.218 ppbv
RT: 16.723 min Scan# 1905
Delta R.T. -0.021 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 49 Resp: 15134

Ion	Ratio	Lower	Upper
49	100		
84	78.8	54.0	100.4



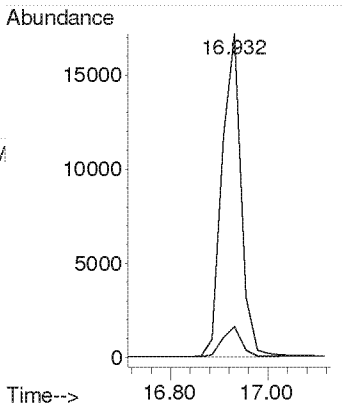
Compounds other than ethylene oxide were not quantitated.

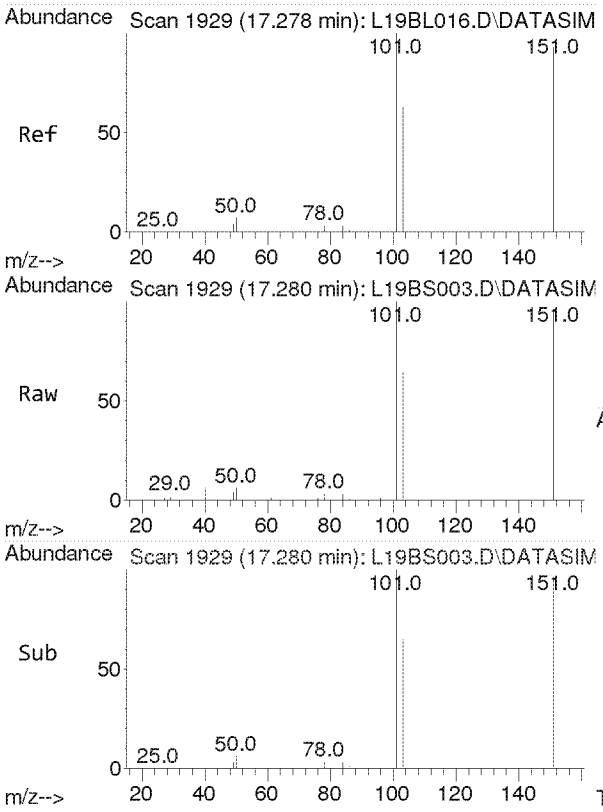


#18
Carbon Disulfide
Concen: 2.213 ppbv
RT: 16.932 min Scan# 1914
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 76 Resp: 46516

Ion	Ratio	Lower	Upper
76	100		
78	9.1	7.4	11.0

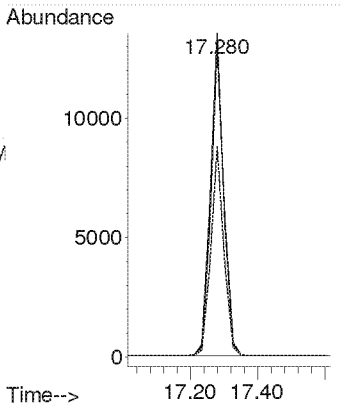




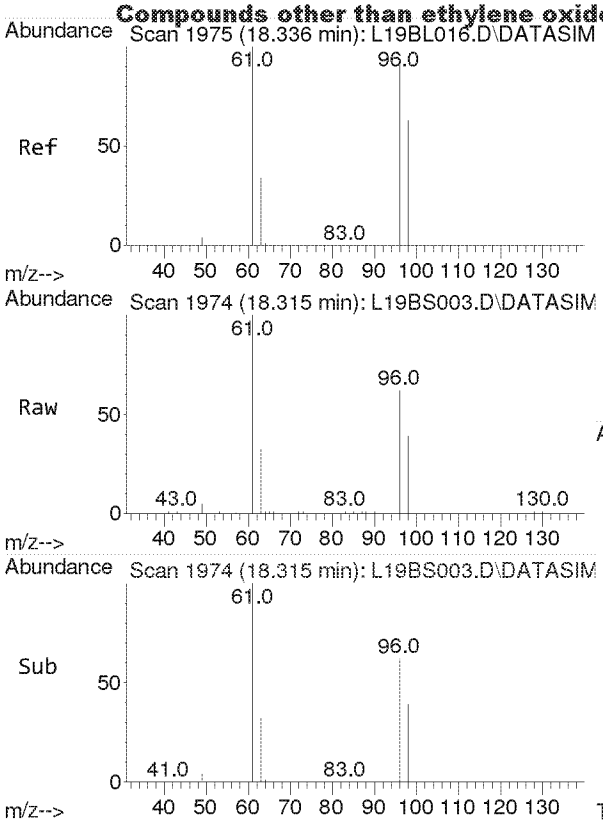
#19
Trichlorotrifluoroethane
Concen: 2.260 ppbv
RT: 17.280 min Scan# 1929
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:101 Resp: 36182

Ion	Ratio	Lower	Upper
101	100		
151	96.0	75.8	113.8
103	64.7	51.1	76.7



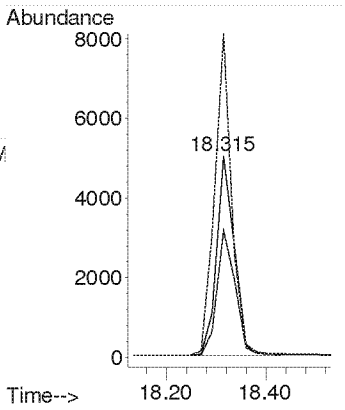
Compounds other than ethylene oxide were not quantitated.

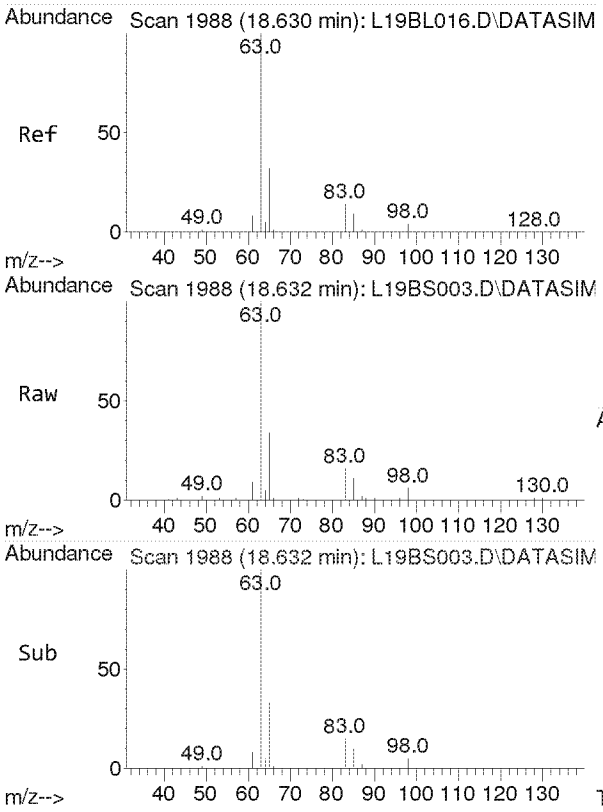


#20
trans-1,2-Dichloroethylene
Concen: 2.197 ppbv
RT: 18.315 min Scan# 1974
Delta R.T. -0.021 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 96 Resp: 12576

Ion	Ratio	Lower	Upper
96	100		
98	64.2	51.5	77.3
61	153.3	122.9	184.3

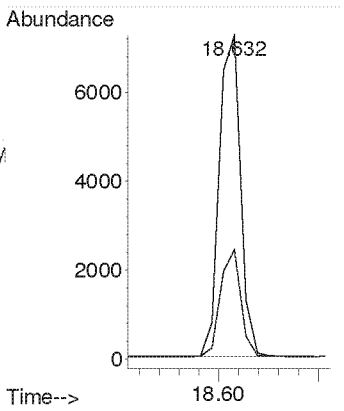




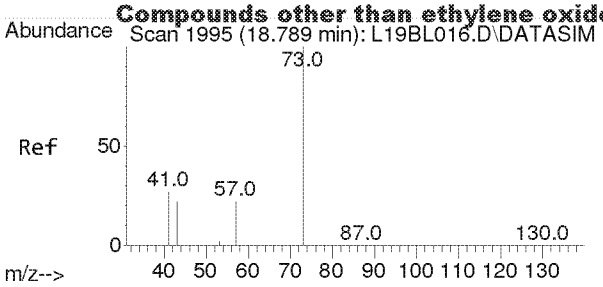
#21
1,1-Dichloroethane
Concen: 2.238 ppbv
RT: 18.632 min Scan# 1988
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 63 Resp: 21539

Ion	Ratio	Lower	Upper
63	100		
65	31.8	25.4	38.0



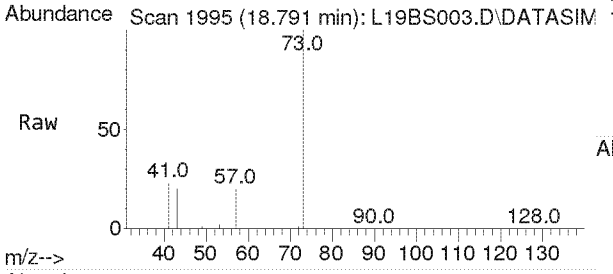
Compounds other than ethylene oxide were not quantitated.

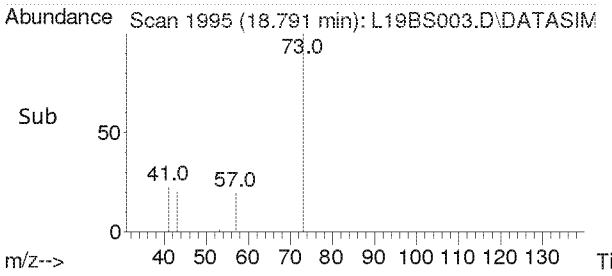


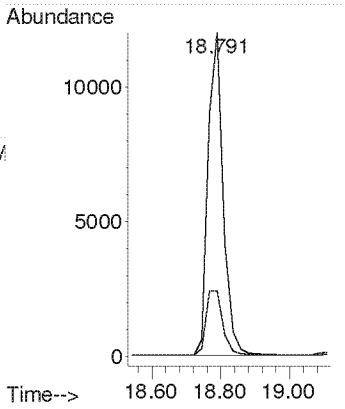
#22
Methyl tert-Butyl Ether
Concen: 2.256 ppbv
RT: 18.791 min Scan# 1995
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

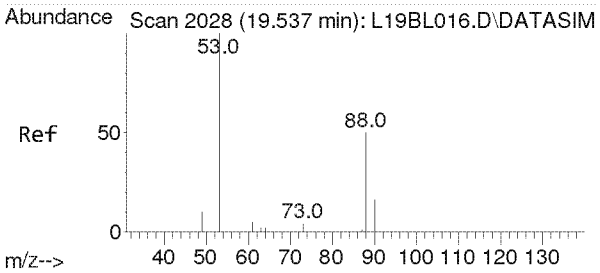
Tgt Ion: 73 Resp: 36415

Ion	Ratio	Lower	Upper
73	100		
57	22.1	18.0	27.0





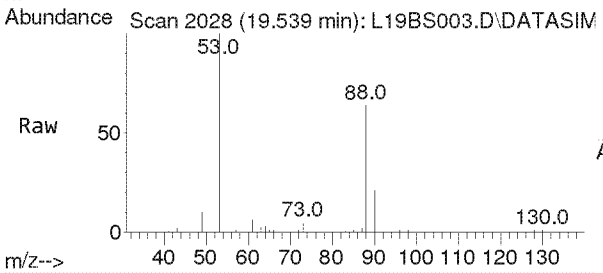


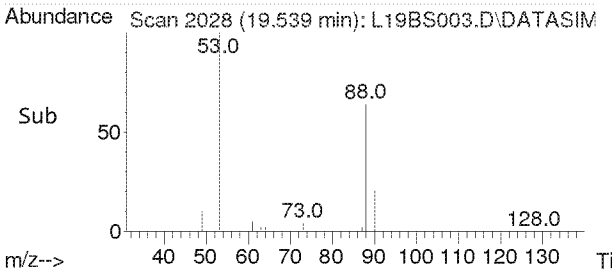


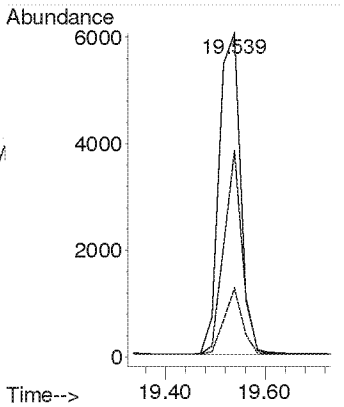
#23
Chloroprene
Concen: 2.315 ppbv
RT: 19.539 min Scan# 2028
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 53 Resp: 18122

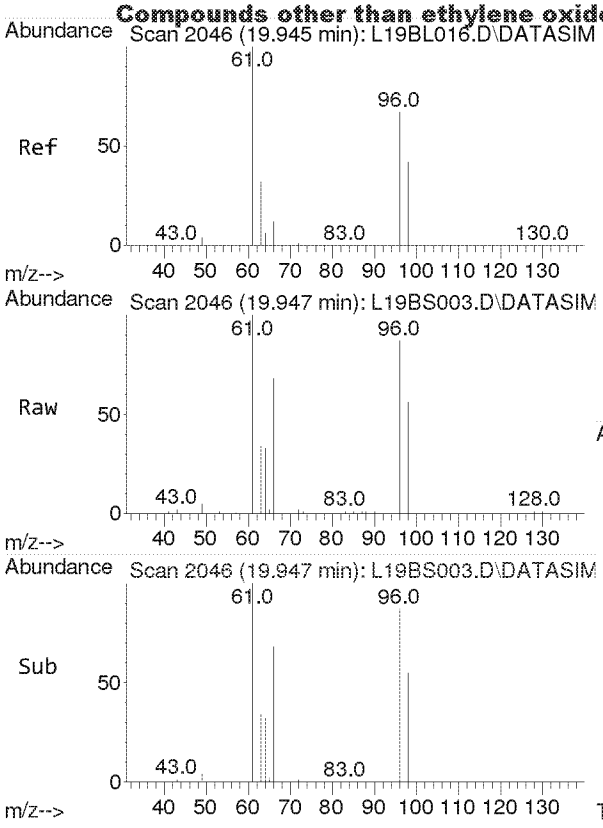
Ion	Ratio	Lower	Upper
53	100		
88	53.8	42.6	64.0
90	17.4	13.9	20.9







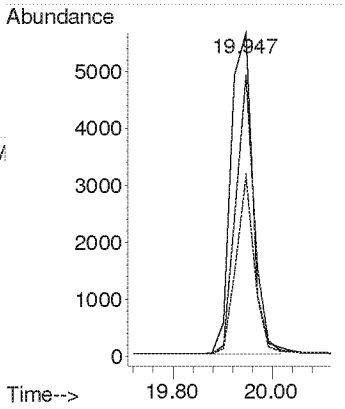
Compounds other than ethylene oxide were not quantitated.

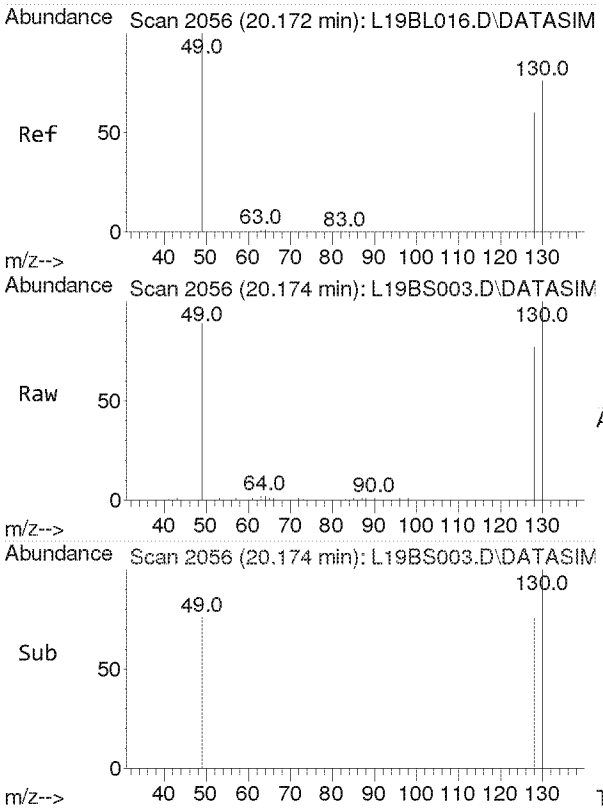


#24
cis-1,2-Dichloroethylene
Concen: 2.215 ppbv
RT: 19.947 min Scan# 2046
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 61 Resp: 16826

Ion	Ratio	Lower	Upper
61	100		
96	74.2	59.0	88.6
98	46.6	37.6	56.4

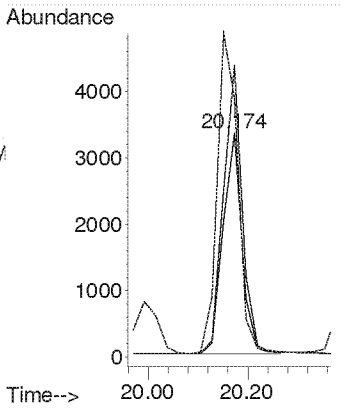




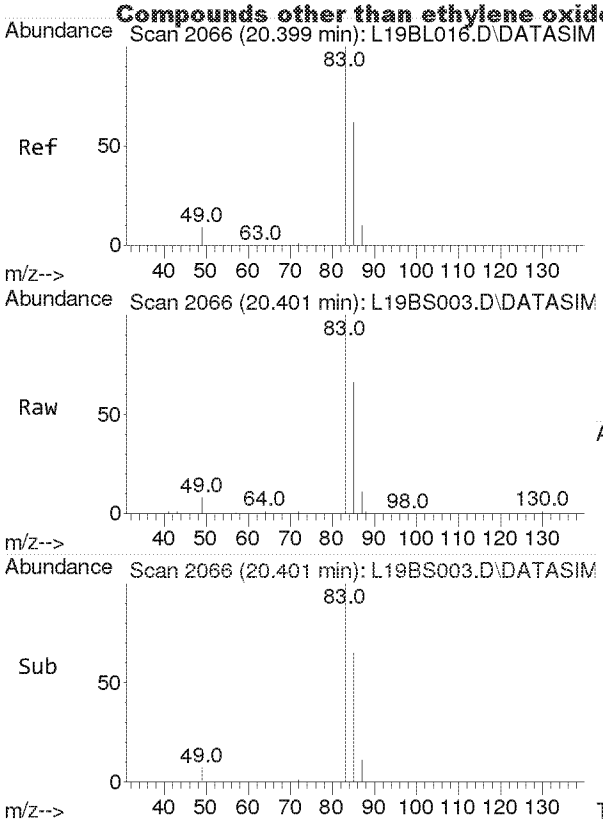
#25
Bromochloromethane
Concen: 2.140 ppbv
RT: 20.174 min Scan# 2056
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:128 Resp: 8787

Ion	Ratio	Lower	Upper
128	100		
130	129.5	103.3	154.9
49	158.3	128.3	192.5



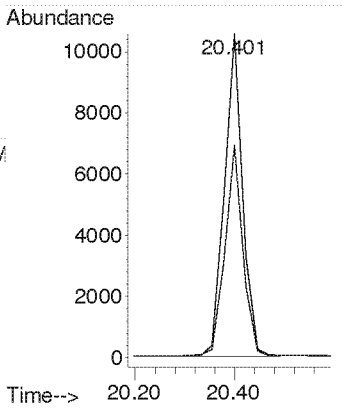
Compounds other than ethylene oxide were not quantitated.

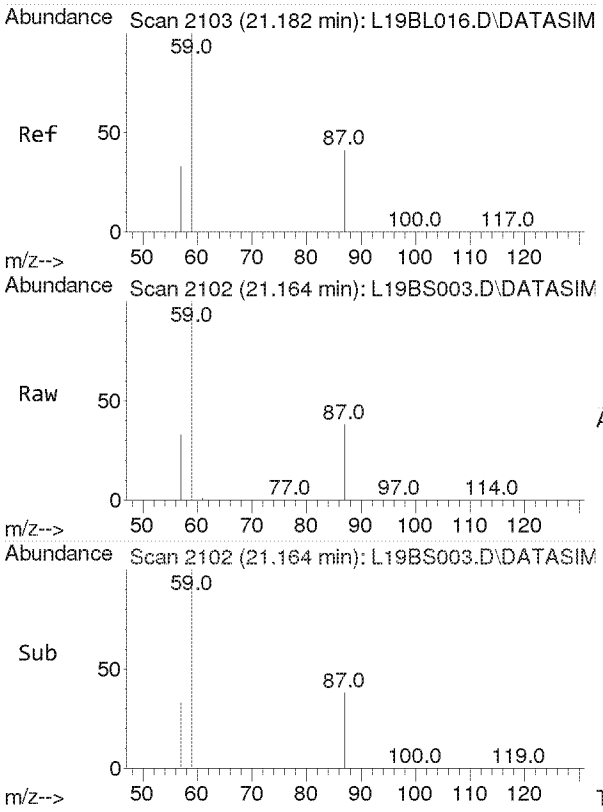


#26
Chloroform
Concen: 2.369 ppbv
RT: 20.401 min Scan# 2066
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 83 Resp: 26447

Ion	Ratio	Lower	Upper
83	100		
85	65.0	51.5	77.3

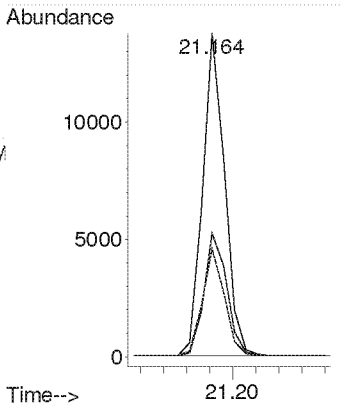




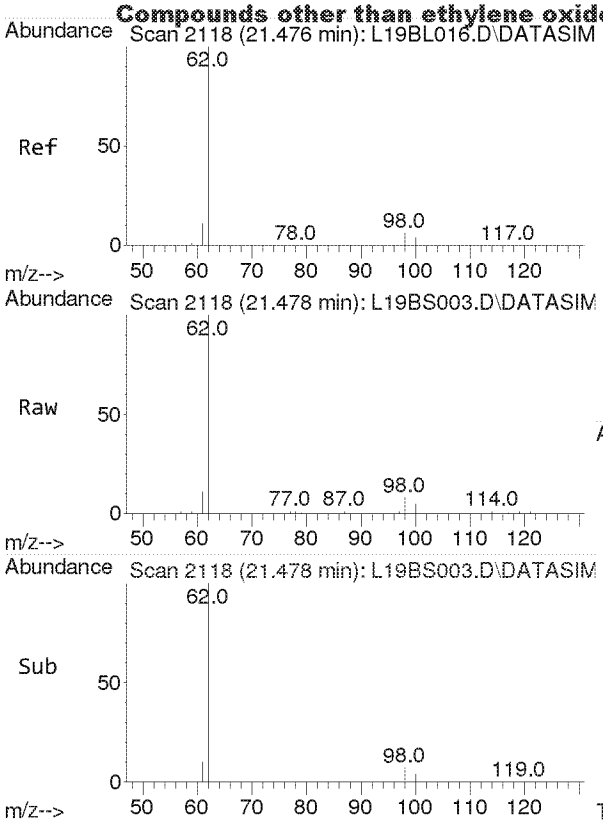
#27
Ethyl tert-Butyl Ether
Concen: 2.356 ppbv
RT: 21.164 min Scan# 2102
Delta R.T. -0.018 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 59 Resp: 36369

Ion	Ratio	Lower	Upper
59	100		
87	39.4	31.5	47.3
57	33.0	26.6	39.8



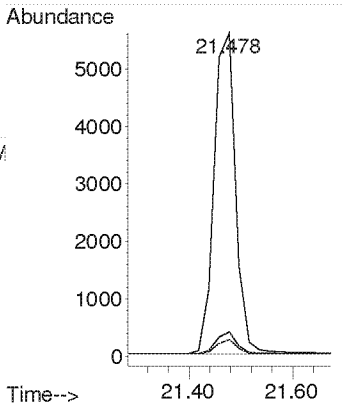
Compounds other than ethylene oxide were not quantitated.

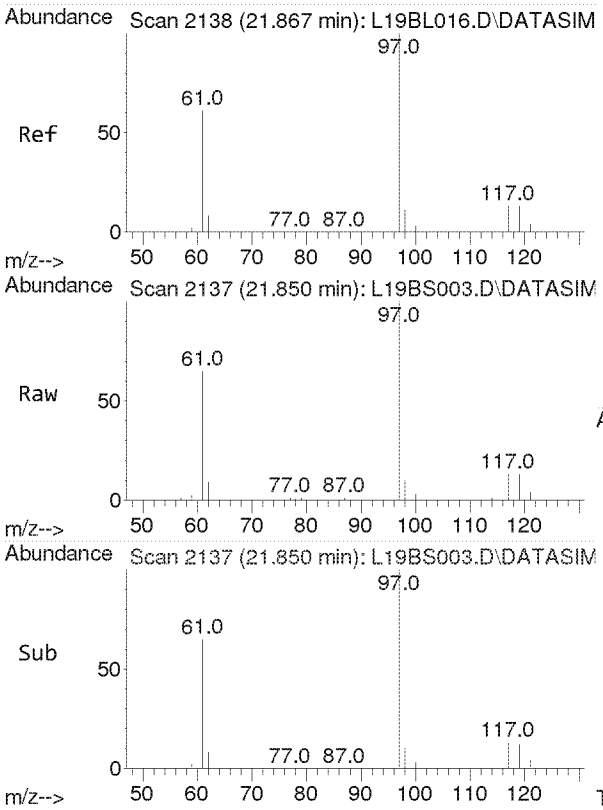


#28
1,2-Dichloroethane
Concen: 2.363 ppbv
RT: 21.478 min Scan# 2118
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 62 Resp: 16193

Ion	Ratio	Lower	Upper
62	100		
98	6.5	5.0	7.6
100	4.0	3.2	4.8

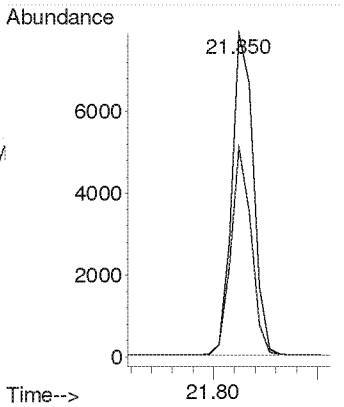




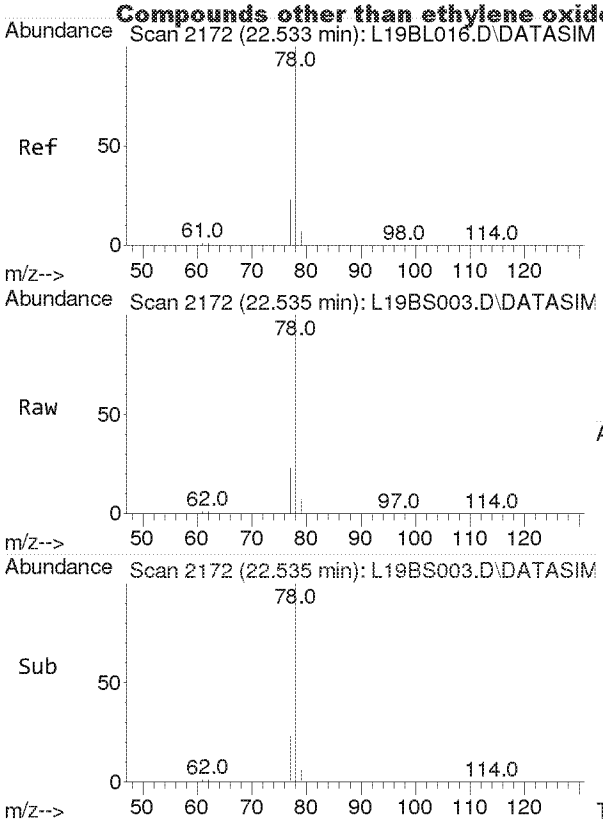
#30
1,1,1-Trichloroethane
Concen: 2.108 ppbv
RT: 21.850 min Scan# 2137
Delta R.T. -0.018 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 97 Resp: 22716

Ion	Ratio	Lower	Upper
97	100		
61	60.9	49.7	74.5



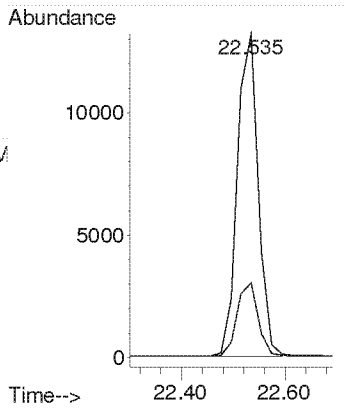
Compounds other than ethylene oxide were not quantitated.

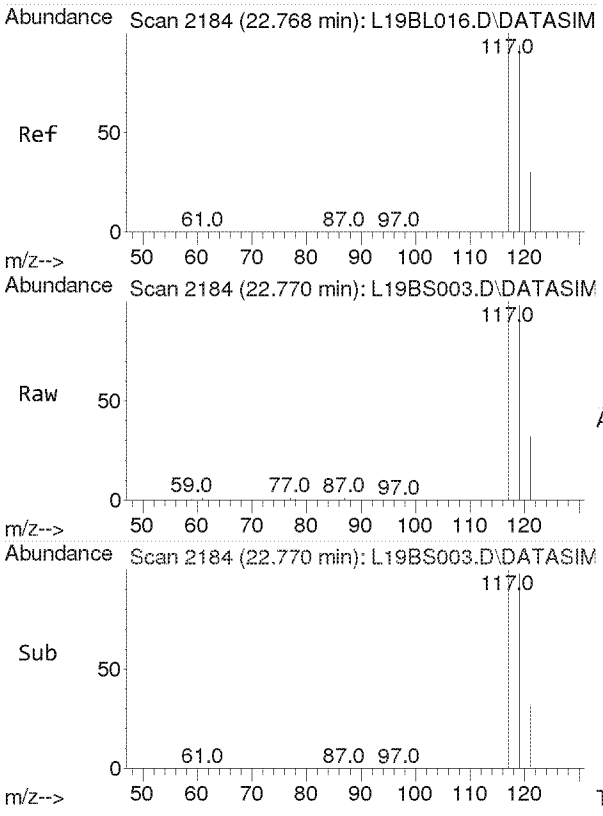


#31
Benzene
Concen: 2.398 ppbv
RT: 22.535 min Scan# 2172
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 78 Resp: 36955

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.4

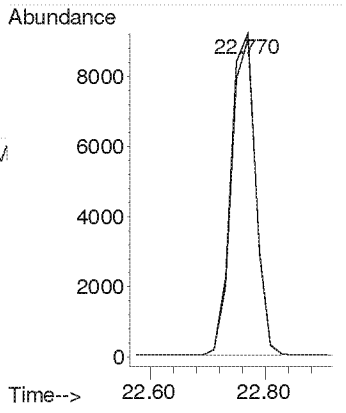




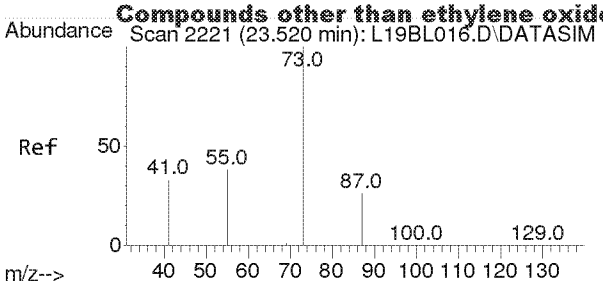
#32
Carbon Tetrachloride
Concen: 2.356 ppbv
RT: 22.770 min Scan# 2184
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:117 Resp: 27191

Ion	Ratio	Lower	Upper
117	100		
119	96.4	77.0	115.6



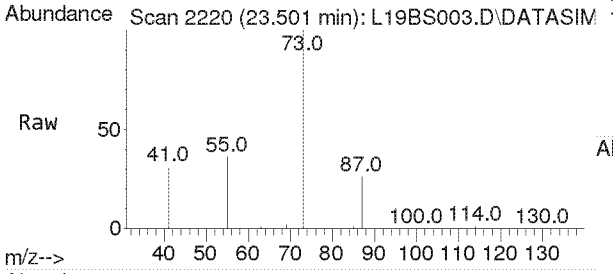
Compounds other than ethylene oxide were not quantitated.

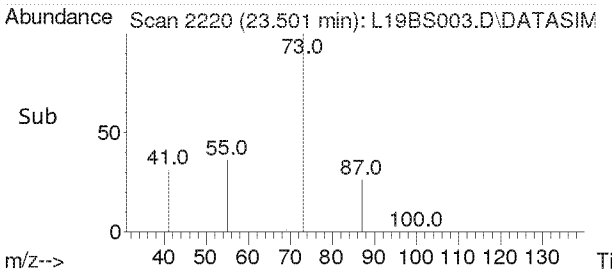


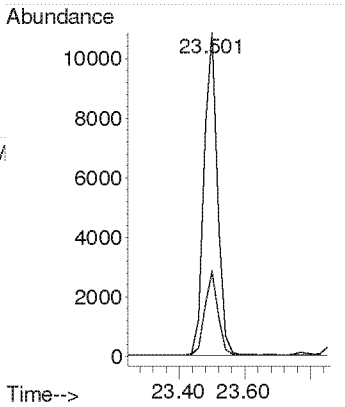
#33
tert-Amyl Methyl Ether
Concen: 2.339 ppbv
RT: 23.501 min Scan# 2220
Delta R.T. -0.019 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

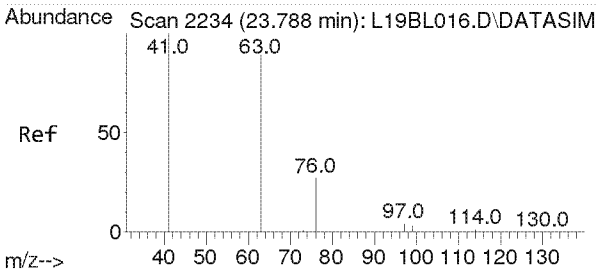
Tgt Ion: 73 Resp: 30608

Ion	Ratio	Lower	Upper
73	100		
87	25.1	20.1	30.1





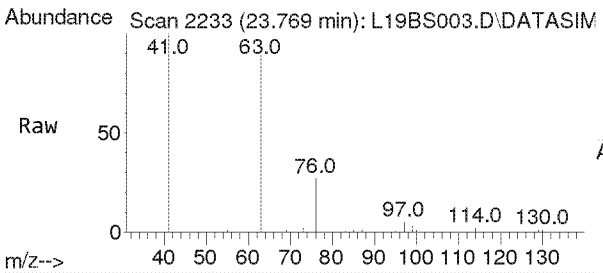


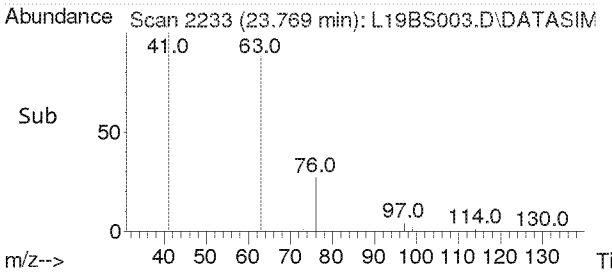


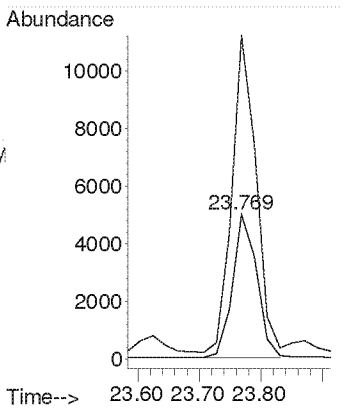
#34
1,2-Dichloropropane
Concen: 2.313 ppbv
RT: 23.769 min Scan# 2233
Delta R.T. -0.019 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 63 Resp: 13553

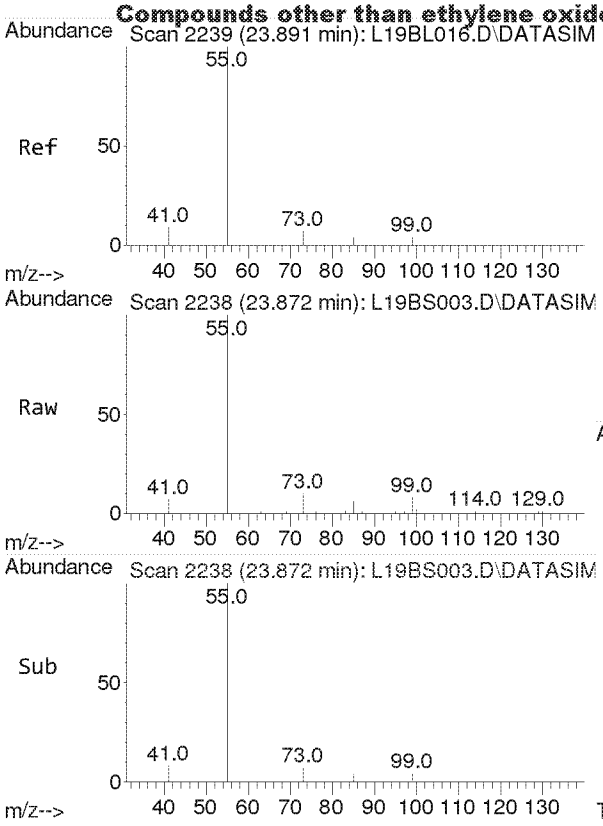
Ion	Ratio	Lower	Upper
63	100		
41	219.3	175.9	263.9







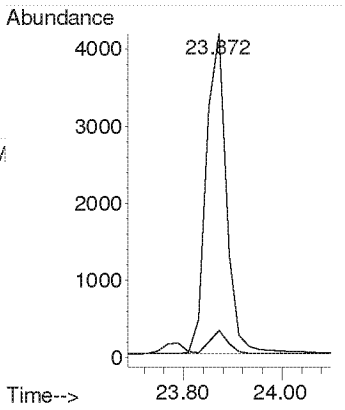
Compounds other than ethylene oxide were not quantitated.

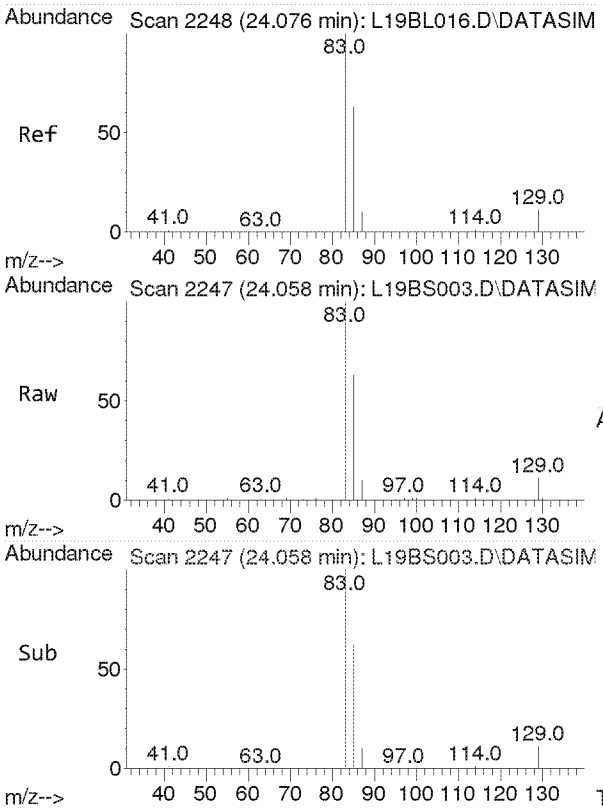


#35
Ethyl Acrylate
Concen: 2.365 ppbv
RT: 23.872 min Scan# 2238
Delta R.T. -0.019 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 55 Resp: 11773

Ion	Ratio	Lower	Upper
55	100		
99	6.4	5.0	7.6

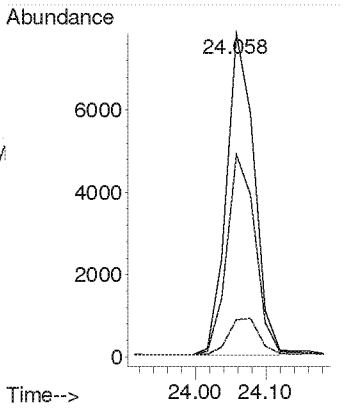




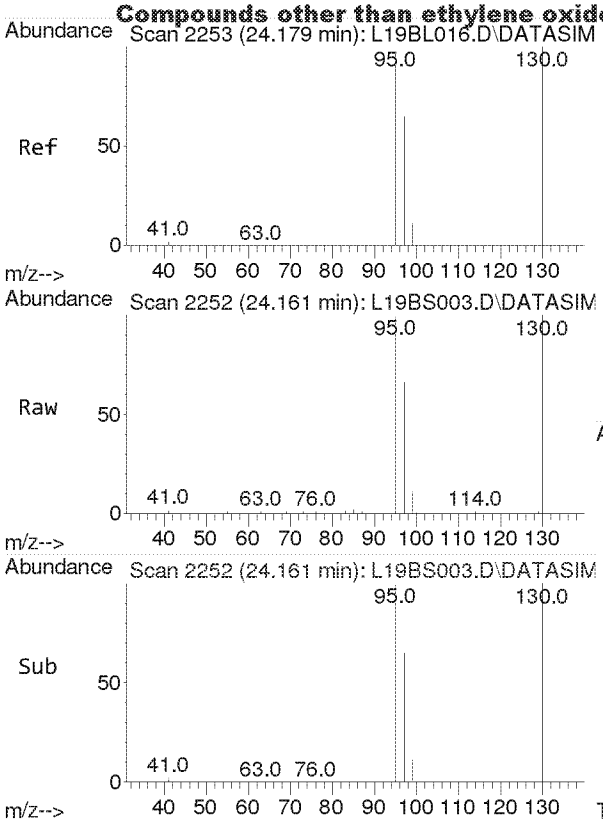
#36
Bromodichloromethane
Concen: 2.070 ppbv
RT: 24.058 min Scan# 2247
Delta R.T. -0.019 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 83 Resp: 21467

Ion	Ratio	Lower	Upper
83	100		
85	63.7	51.0	76.4
129	12.5	9.9	14.9



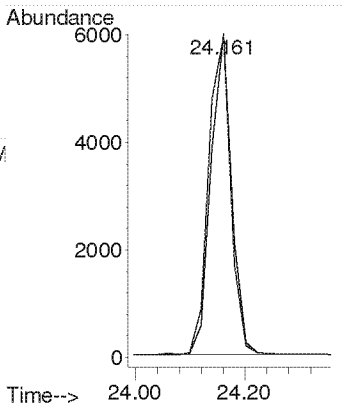
Compounds other than ethylene oxide were not quantitated.

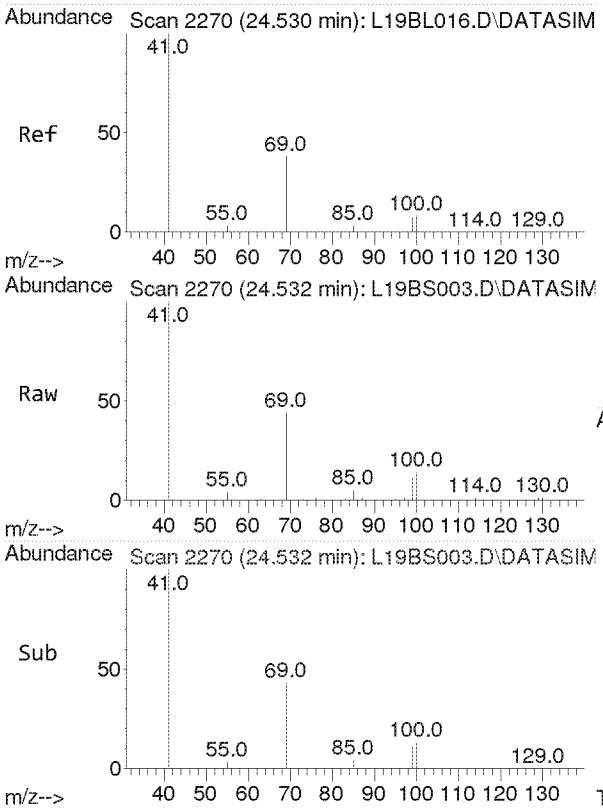


#37
Trichloroethylene
Concen: 2.128 ppbv
RT: 24.161 min Scan# 2252
Delta R.T. -0.019 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:130 Resp: 15626

Ion	Ratio	Lower	Upper
130	100		
95	106.8	84.9	127.3

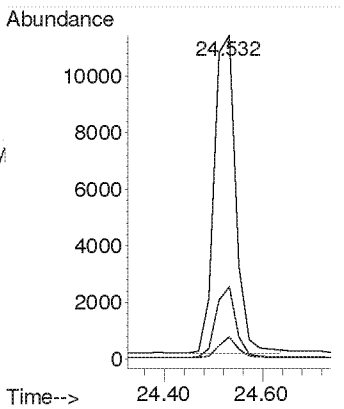




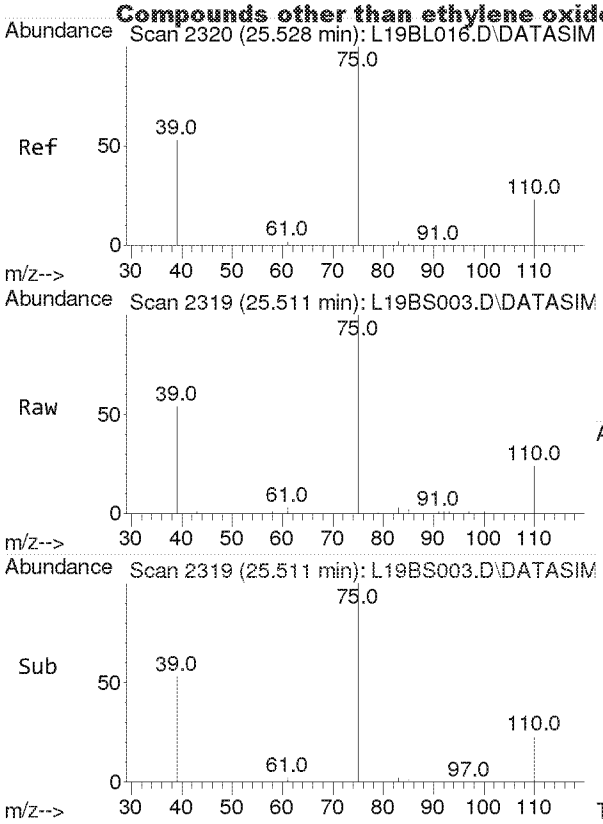
#38
Methyl Methacrylate
Concen: 2.298 ppbv
RT: 24.532 min Scan# 2270
Delta R.T. 0.002 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 41 Resp: 34329

Ion	Ratio	Lower	Upper
41	100		
69	20.8	16.8	25.2
100	5.6	4.5	6.7



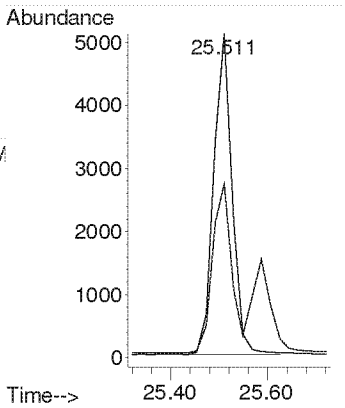
Compounds other than ethylene oxide were not quantitated.

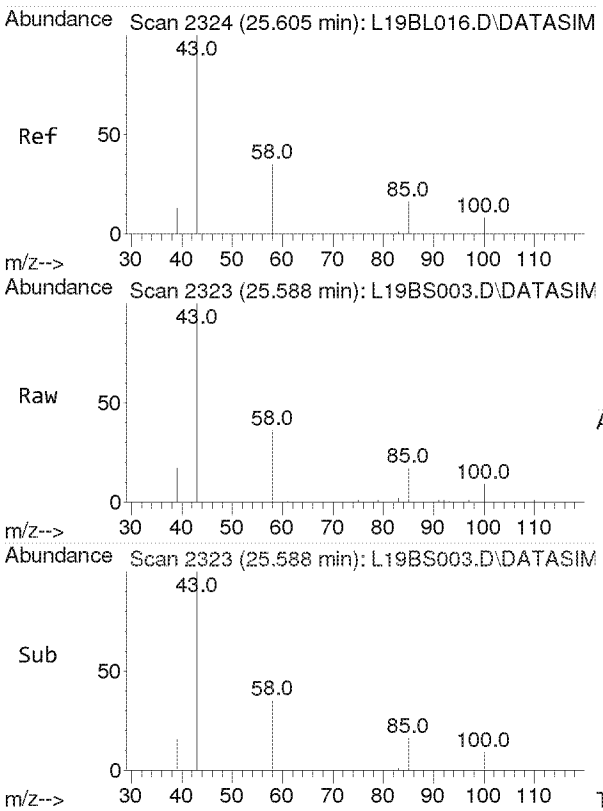


#39
cis-1,3-Dichloropropene
Concen: 2.634 ppbv
RT: 25.511 min Scan# 2319
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 75 Resp: 13402

Ion	Ratio	Lower	Upper
75	100		
39	55.3	43.4	65.0

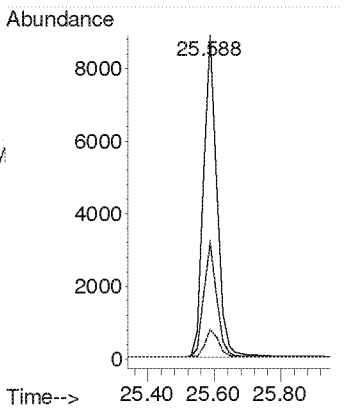




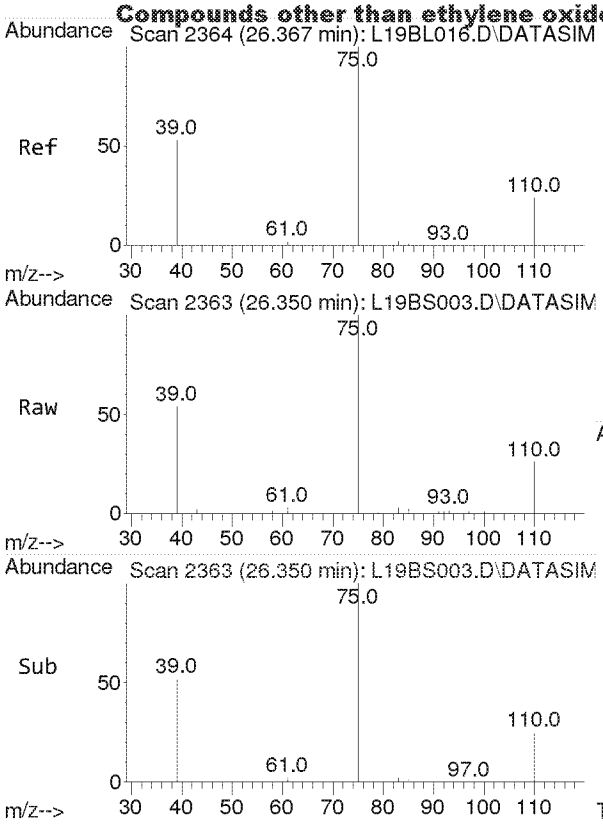
#40
Methyl Isobutyl Ketone
Concen: 2.231 ppbv
RT: 25.588 min Scan# 2323
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 43 Resp: 24506

Ion	Ratio	Lower	Upper
43	100		
58	35.1	28.0	42.0
100	8.8	7.0	10.4



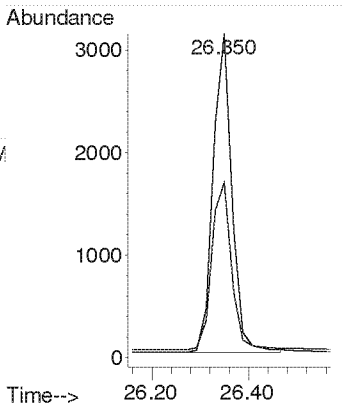
Compounds other than ethylene oxide were not quantitated.

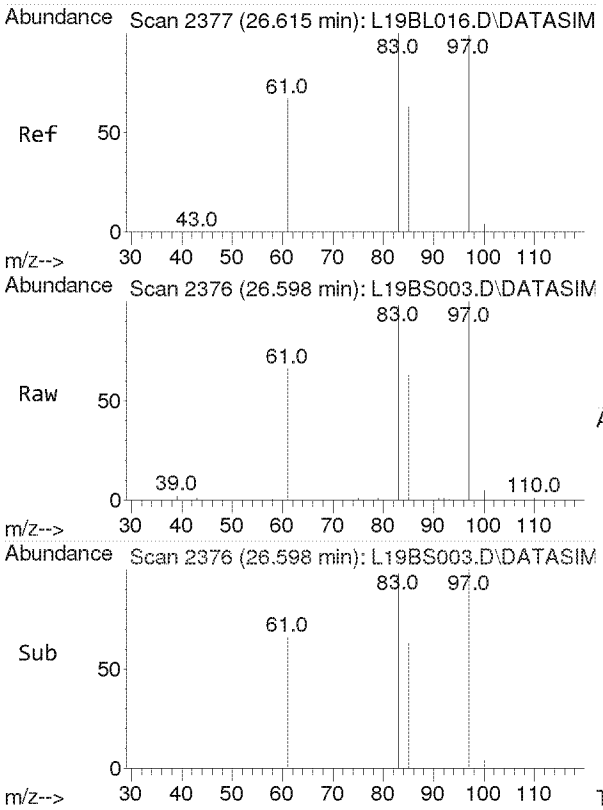


#41
trans-1,3-Dichloropropene
Concen: 2.462 ppbv
RT: 26.350 min Scan# 2363
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 75 Resp: 8394

Ion	Ratio	Lower	Upper
75	100		
39	55.1	42.9	64.3

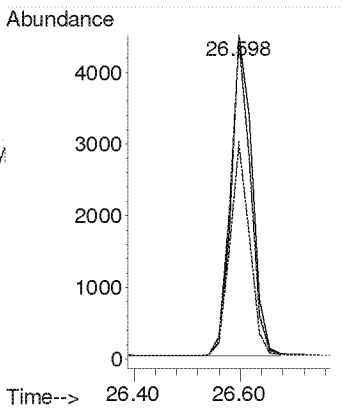




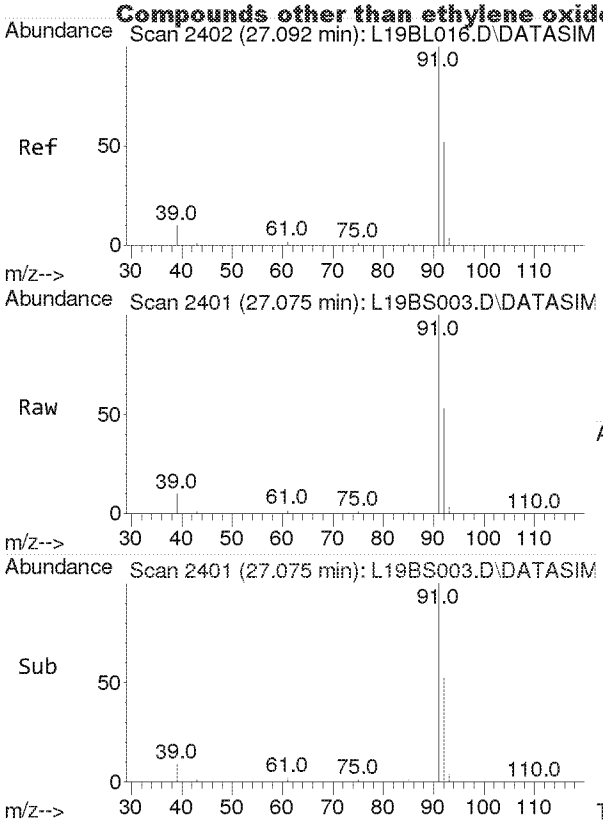
#42
1,1,2-Trichloroethane
Concen: 2.282 ppbv
RT: 26.598 min Scan# 2376
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 97 Resp: 12234

Ion	Ratio	Lower	Upper
97	100		
83	94.6	75.4	113.0
61	62.8	49.8	74.6



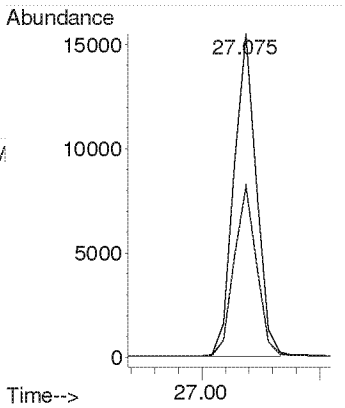
Compounds other than ethylene oxide were not quantitated.

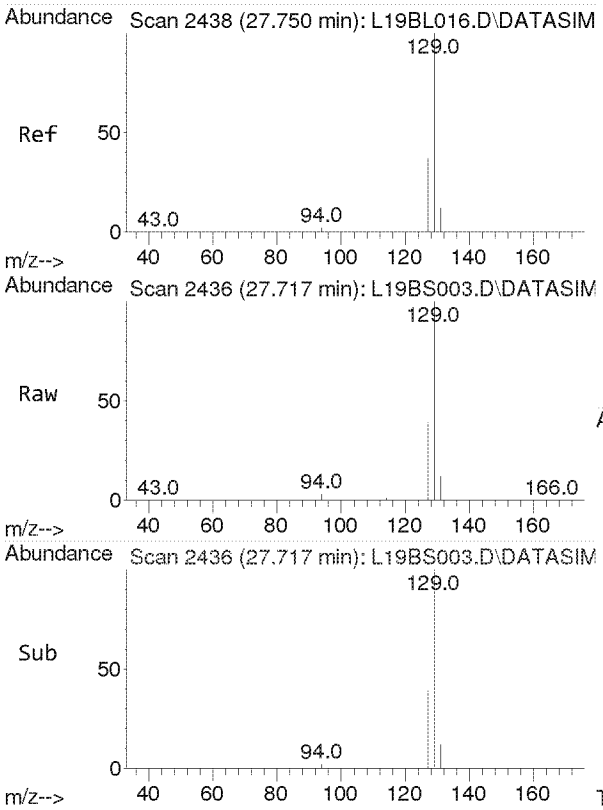


#44
Toluene
Concen: 2.422 ppbv
RT: 27.075 min Scan# 2401
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 91 Resp: 40396

Ion	Ratio	Lower	Upper
91	100		
92	52.8	42.0	63.0

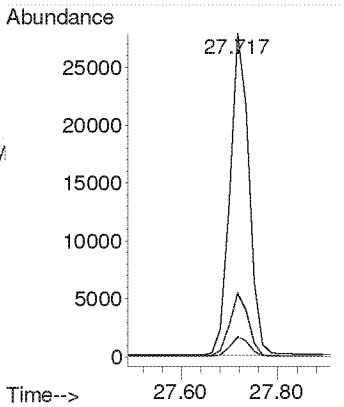




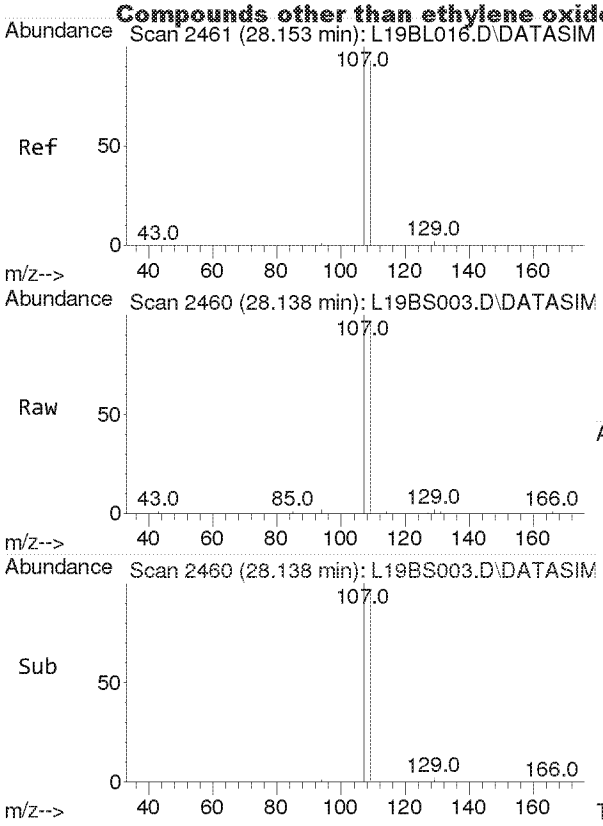
#45
Dibromochloromethane
Concen: 2.322 ppbv
RT: 27.717 min Scan# 2436
Delta R.T. -0.033 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:129 Resp: 76006

Ion	Ratio	Lower	Upper
129	100		
127	19.3	15.4	23.2
131	6.0	4.8	7.2



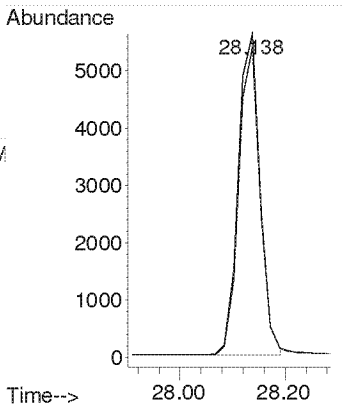
Compounds other than ethylene oxide were not quantitated.

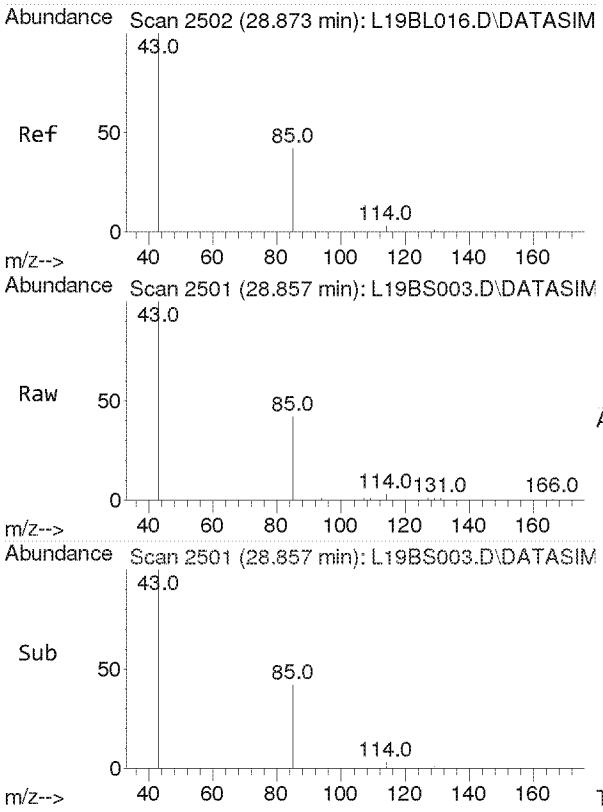


#46
1,2-Dibromoethane
Concen: 2.555 ppbv
RT: 28.138 min Scan# 2460
Delta R.T. -0.015 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:107 Resp: 15979

Ion	Ratio	Lower	Upper
107	100		
109	94.3	75.4	113.0

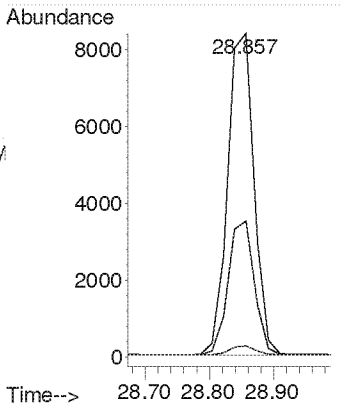




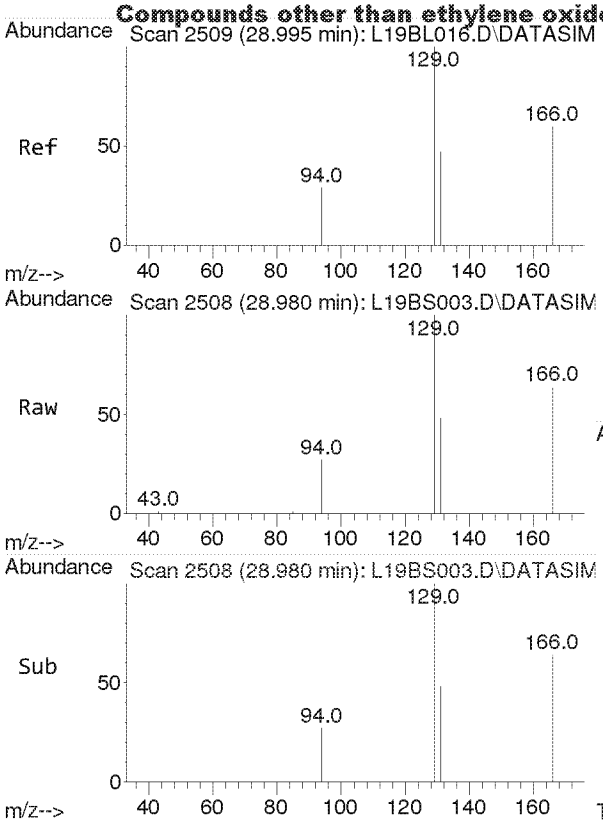
#47
n-Octane
Concen: 2.370 ppbv
RT: 28.857 min Scan# 2501
Delta R.T. -0.015 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 43 Resp: 23806

Ion	Ratio	Lower	Upper
43	100		
85	41.4	33.0	49.6
114	2.7	2.2	3.4



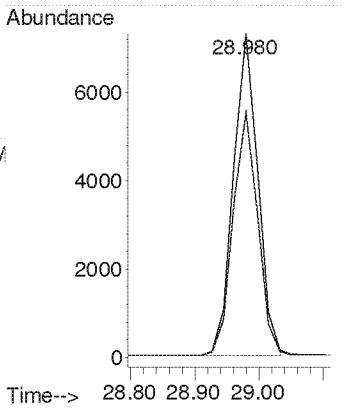
Compounds other than ethylene oxide were not quantitated.

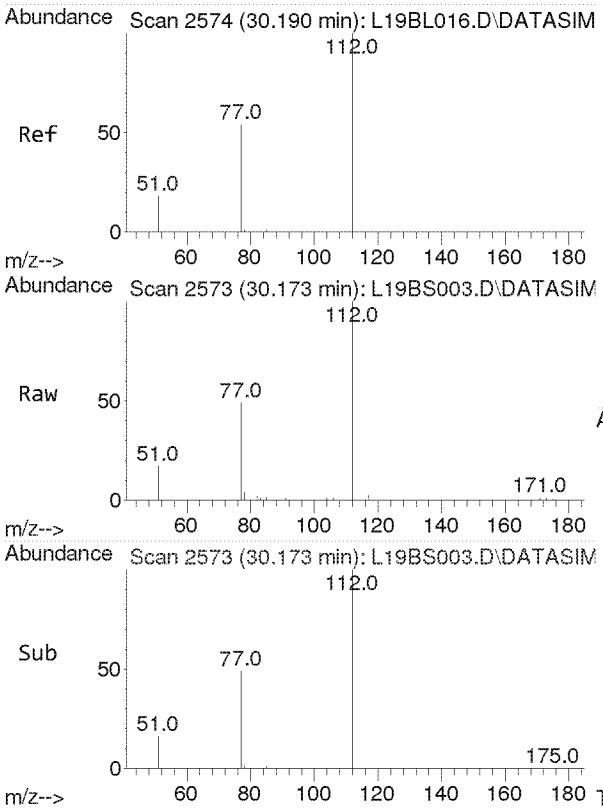


#48
Tetrachloroethylene
Concen: 2.383 ppbv
RT: 28.980 min Scan# 2508
Delta R.T. -0.015 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:166 Resp: 19125

Ion	Ratio	Lower	Upper
166	100		
131	76.6	61.5	92.3

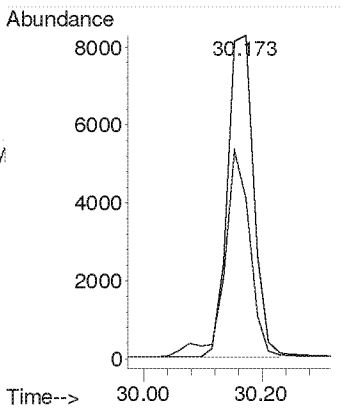




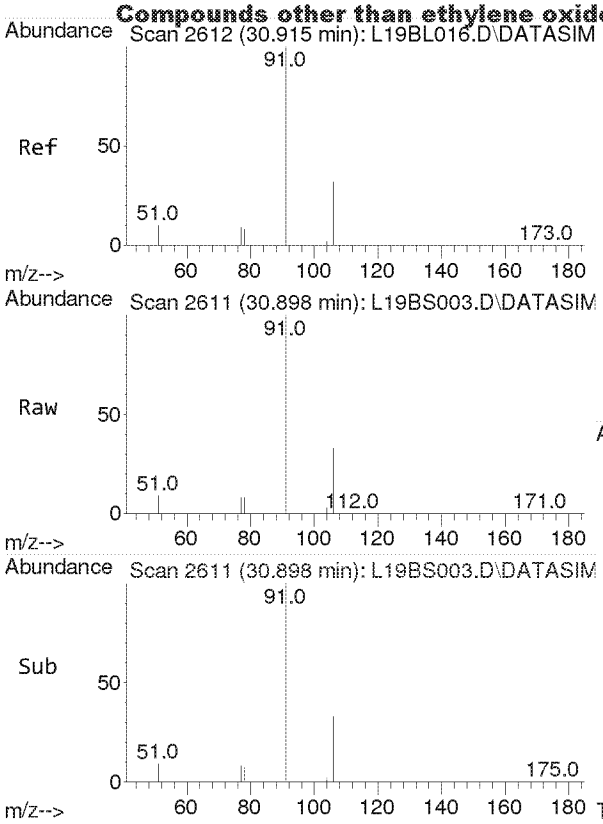
#49
Chlorobenzene
Concen: 2.373 ppbv
RT: 30.173 min Scan# 2573
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:112 Resp: 25253

Ion	Ratio	Lower	Upper
112	100		
77	61.1	47.8	71.6



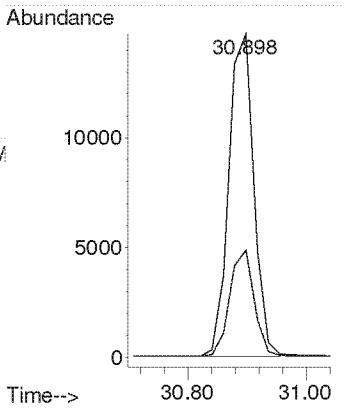
Compounds other than ethylene oxide were not quantitated.

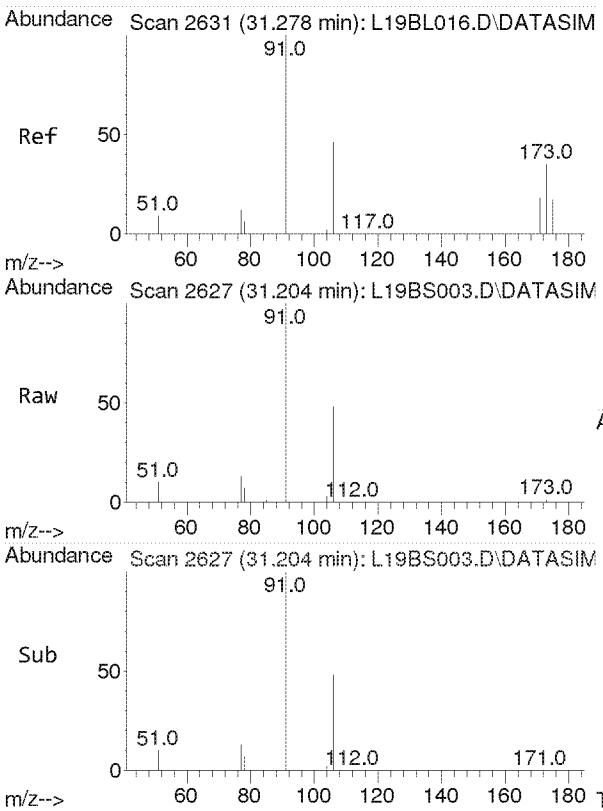


#50
Ethylbenzene
Concen: 2.448 ppbv
RT: 30.898 min Scan# 2611
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 91 Resp: 42914

Ion	Ratio	Lower	Upper
91	100		
106	32.2	26.0	39.0

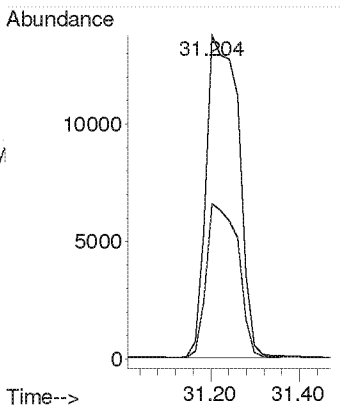




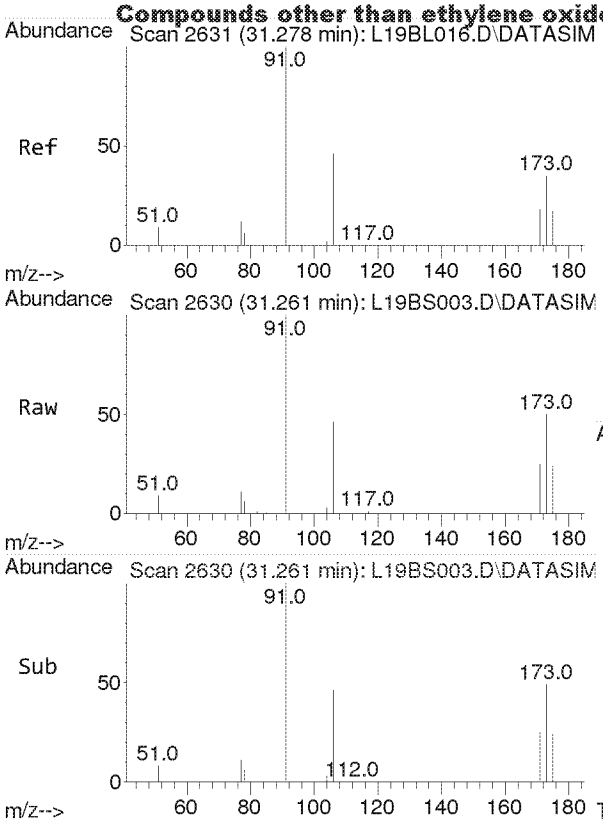
#51
m,p-Xylene
Concen: 4.703 ppbv
RT: 31.204 min Scan# 2627
Delta R.T. -0.074 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 91 Resp: 69546

Ion	Ratio	Lower	Upper
91	100		
106	46.7	37.3	55.9



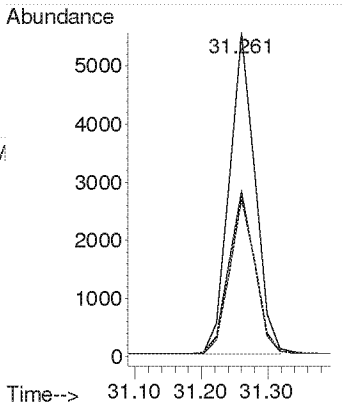
Compounds other than ethylene oxide were not quantitated.

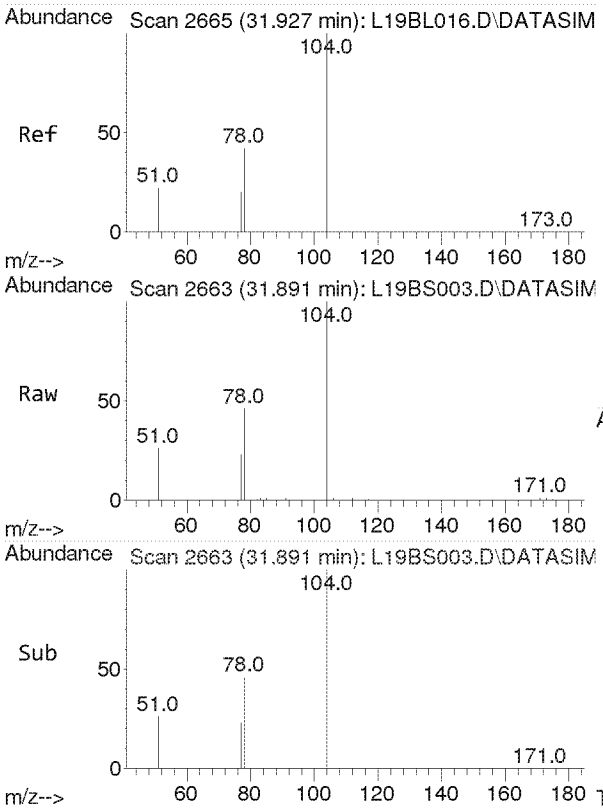


#52
Bromoform
Concen: 2.358 ppbv
RT: 31.261 min Scan# 2630
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:173 Resp: 14925

Ion	Ratio	Lower	Upper
173	100		
171	51.0	41.0	61.6
175	48.6	39.1	58.7

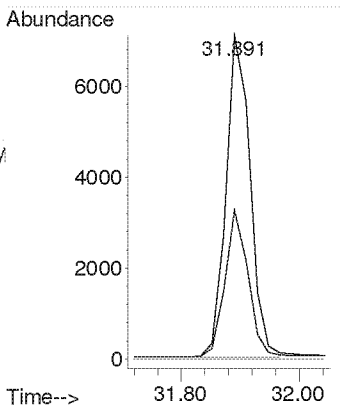




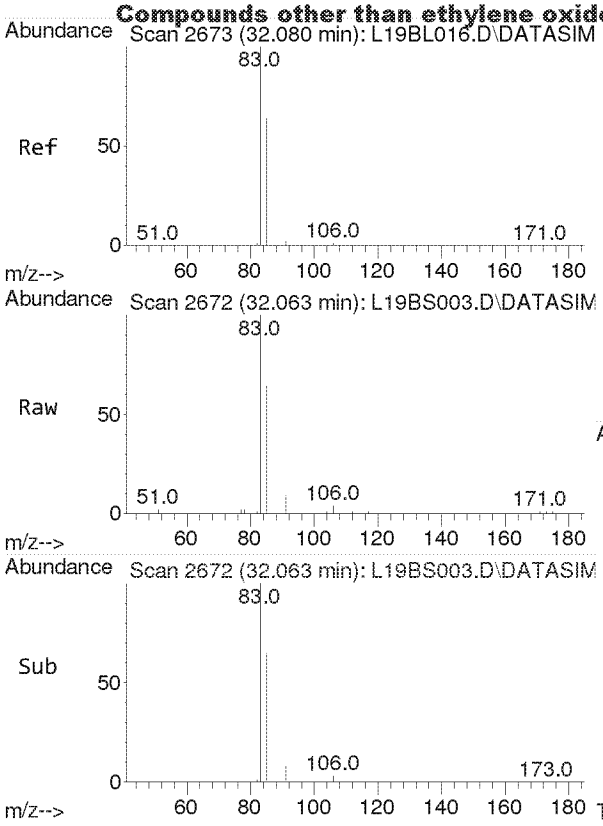
#53
Styrene
Concen: 2.377 ppbv
RT: 31.891 min Scan# 2663
Delta R.T. -0.036 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:104 Resp: 19925

Ion	Ratio	Lower	Upper
104	100		
78	43.6	35.4	53.2
103	0.0	0.0	0.0



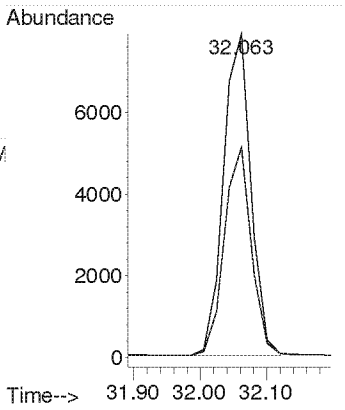
Compounds other than ethylene oxide were not quantitated.

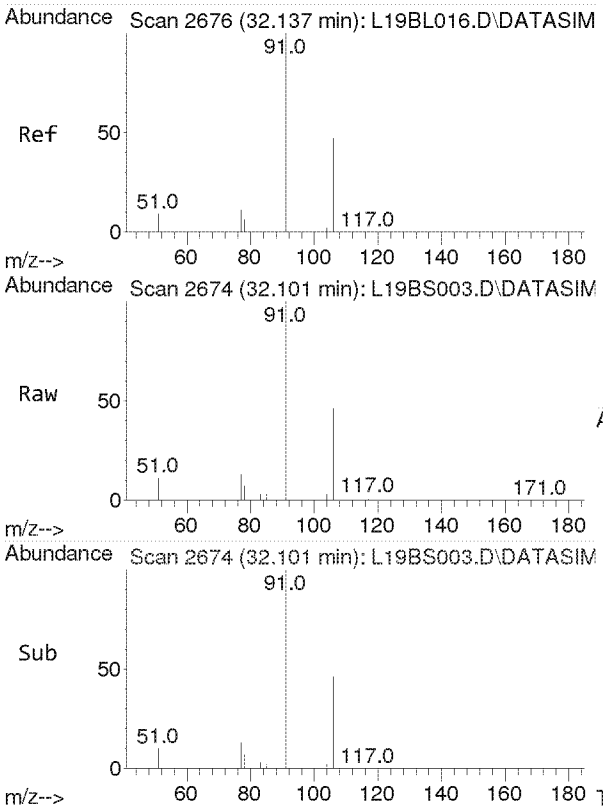


#54
1,1,2,2-Tetrachloroethane
Concen: 2.385 ppbv
RT: 32.063 min Scan# 2672
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 83 Resp: 22760

Ion	Ratio	Lower	Upper
83	100		
85	63.8	51.6	77.4

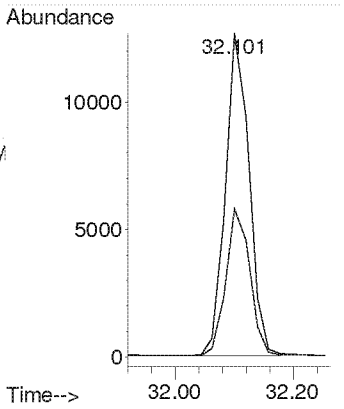




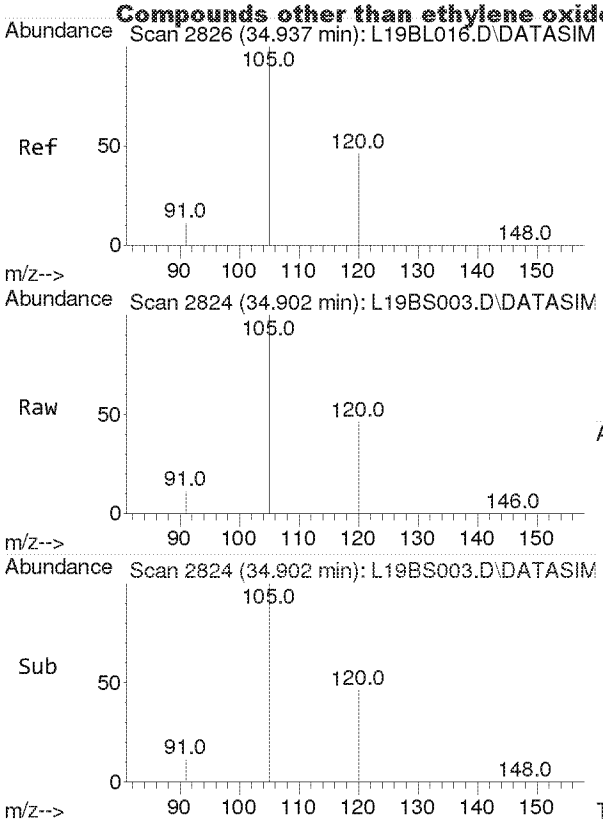
#55
o-Xylene
Concen: 2.393 ppbv
RT: 32.101 min Scan# 2674
Delta R.T. -0.036 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion: 91 Resp: 34918

Ion	Ratio	Lower	Upper
91	100		
106	46.2	36.6	55.0



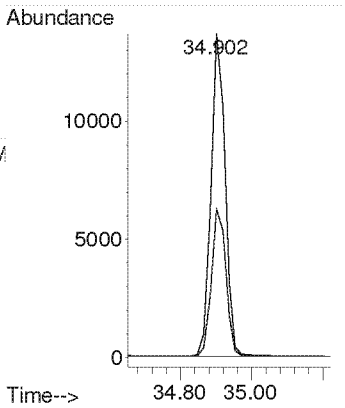
Compounds other than ethylene oxide were not quantitated.

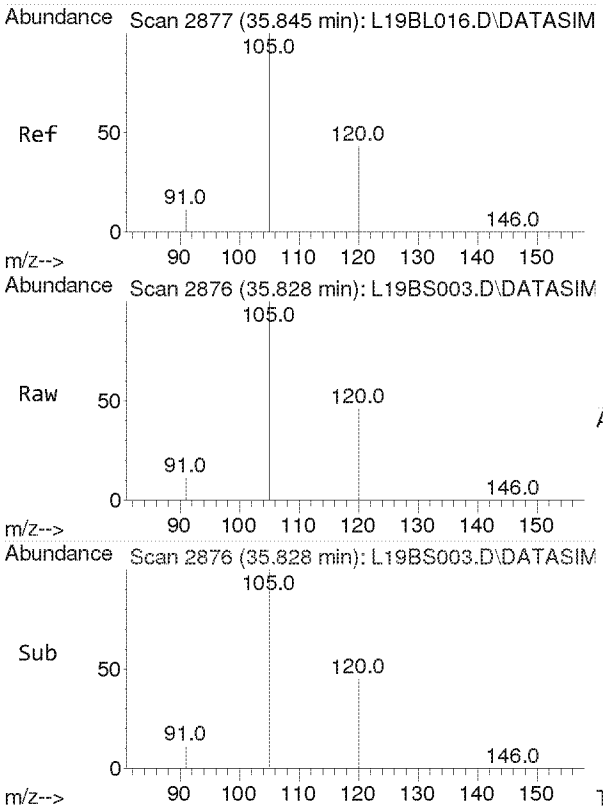


#56
1,3,5-Trimethylbenzene
Concen: 2.388 ppbv
RT: 34.902 min Scan# 2824
Delta R.T. -0.035 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:105 Resp: 37443

Ion	Ratio	Lower	Upper
105	100		
120	46.9	36.8	55.2

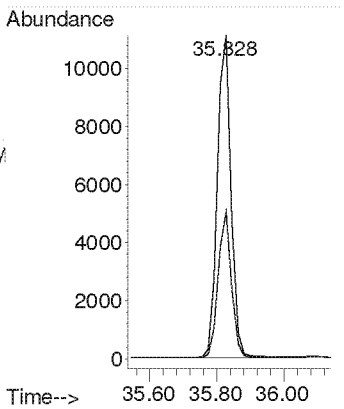




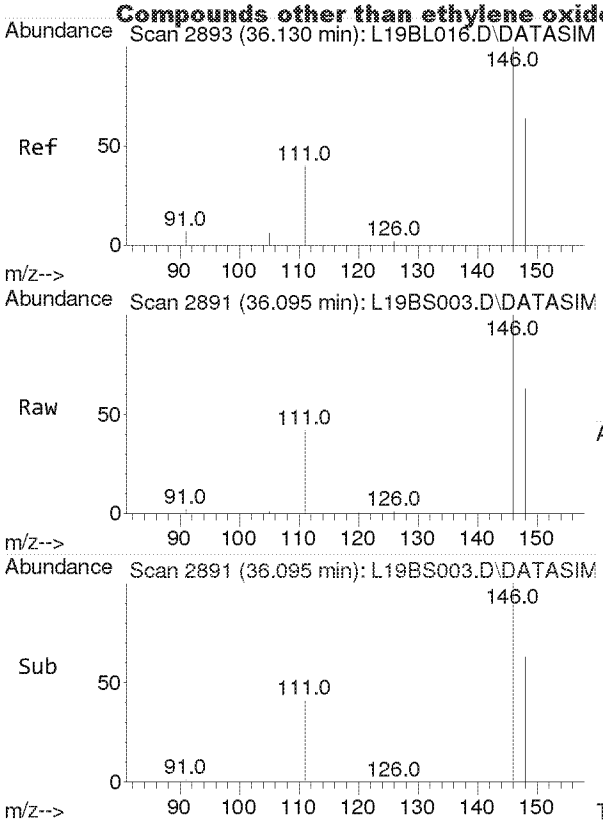
#57
1,2,4-Trimethylbenzene
Concen: 2.305 ppbv
RT: 35.828 min Scan# 2876
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:105 Resp: 31261

Ion	Ratio	Lower	Upper
105	100		
120	44.0	35.2	52.8



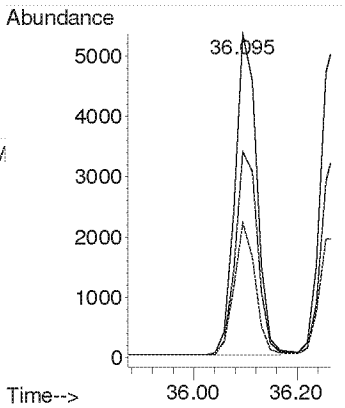
Compounds other than ethylene oxide were not quantitated.

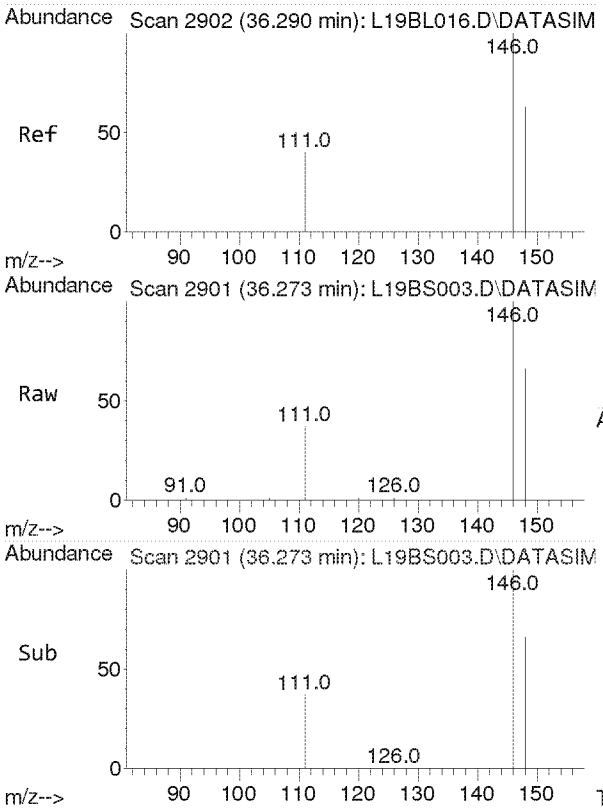


#58
m-Dichlorobenzene
Concen: 2.167 ppbv
RT: 36.095 min Scan# 2891
Delta R.T. -0.035 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:146 Resp: 15452

Ion	Ratio	Lower	Upper
146	100		
148	64.3	51.3	76.9
111	39.5	32.1	48.1

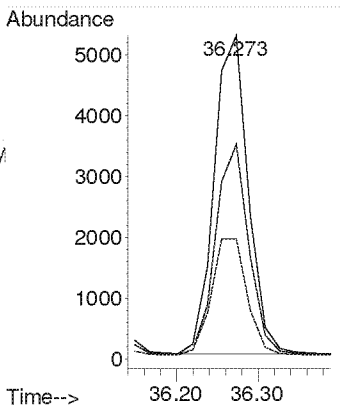




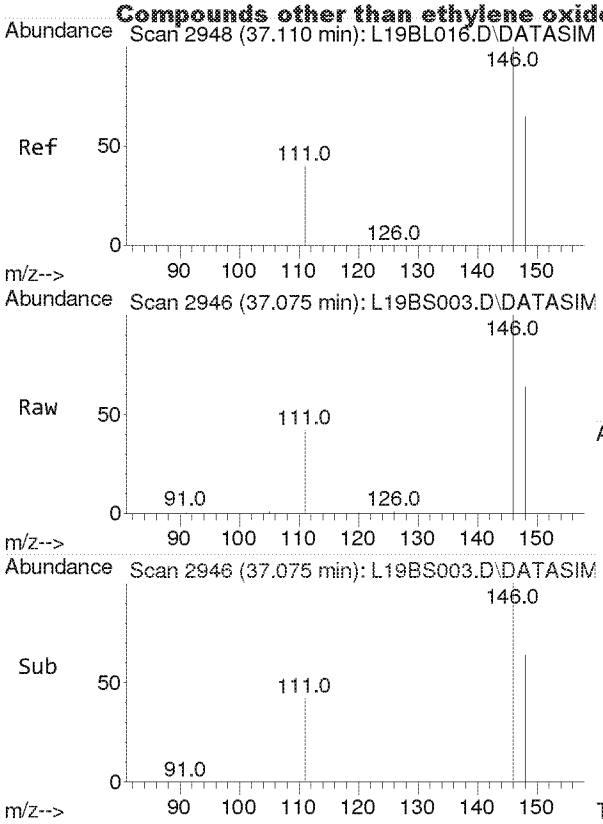
#59
p-Dichlorobenzene
Concen: 2.616 ppbv
RT: 36.273 min Scan# 2901
Delta R.T. -0.017 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:146 Resp: 15193

Ion	Ratio	Lower	Upper
146	100		
148	64.3	51.4	77.2
111	38.5	31.0	46.4



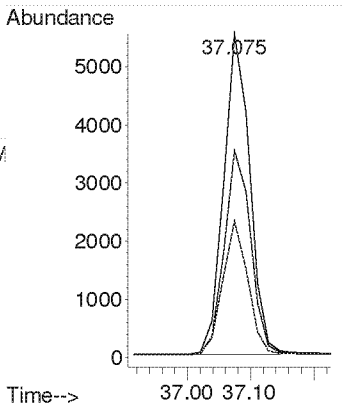
Compounds other than ethylene oxide were not quantitated.

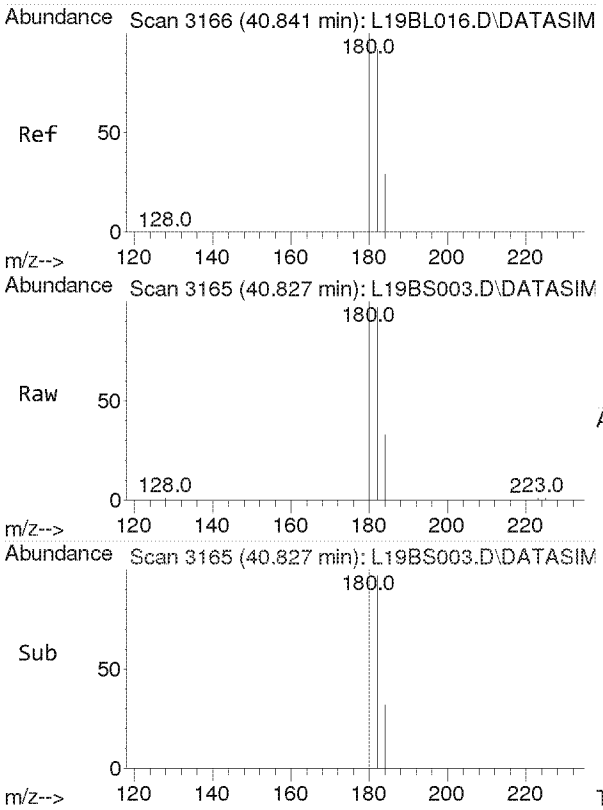


#60
o-Dichlorobenzene
Concen: 2.409 ppbv
RT: 37.075 min Scan# 2946
Delta R.T. -0.035 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:146 Resp: 15709

Ion	Ratio	Lower	Upper
146	100		
148	64.4	51.2	76.8
111	40.2	32.6	49.0

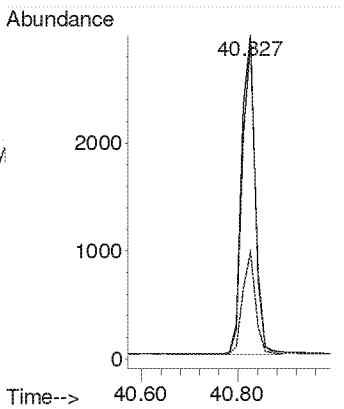




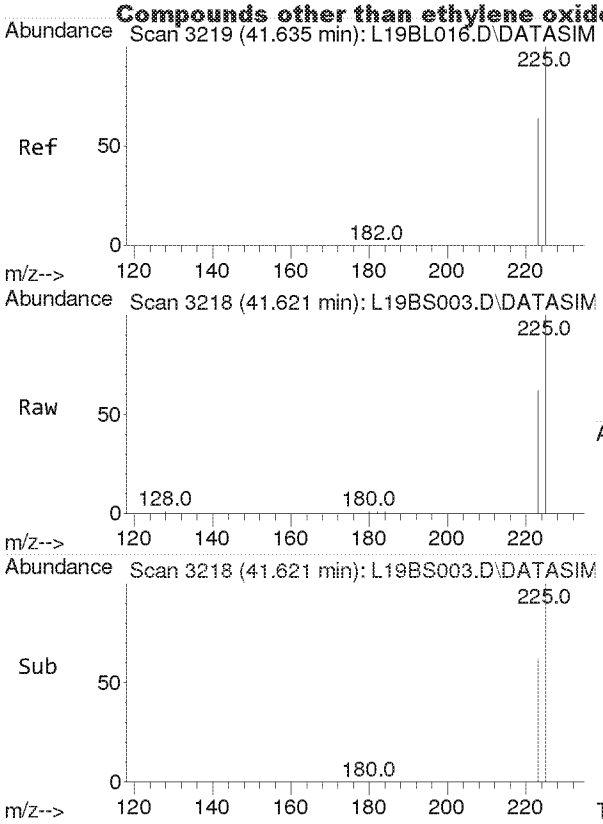
#61
1,2,4-Trichlorobenzene
Concen: 2.580 ppbv
RT: 40.827 min Scan# 3165
Delta R.T. -0.014 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:180 Resp: 5705

Ion	Ratio	Lower	Upper
180	100		
182	94.7	75.7	113.5
184	30.3	24.2	36.2



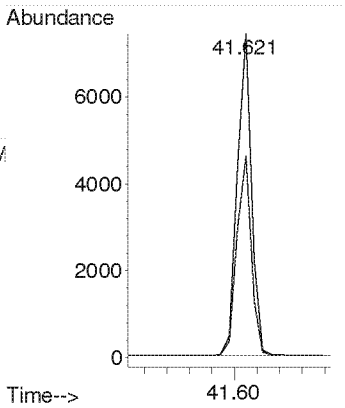
Compounds other than ethylene oxide were not quantitated.



#62
Hexachloro-1,3-butadiene
Concen: 2.319 ppbv
RT: 41.621 min Scan# 3218
Delta R.T. -0.014 min
Lab File: L19BS003.D
Acq: 19 Feb 2019 12:44 pm

Tgt Ion:225 Resp: 13097

Ion	Ratio	Lower	Upper
225	100		
223	63.1	49.9	74.9



Compounds other than ethylene oxide were not quantitated.

TO-15 Method Blank and
Annual Canister Certification Blank

	Analyst: K Date: 2-20-19	Data File Name	L19BS006.D			
		Operator	MAH			
		Acq. Method File	9020003.M			
	Reviewer: RLB Date: 2/22/19	Sample Name	B9B1907-BLK1			
		Misc Info	80 ML 8L13001,			
#	Name	Target Response	Amount (ppbv)	PASS*		Blank Criteria
1)	IS-Hexane-d14	49101		NA		NA
2)	Acetylene	0	0.000	Y		0.118
3)	Propylene	74	0.015	Y		0.192
4)	Dichlorodifluoromethane	0	0.000	Y		0.082
5)	Chloromethane	0	0.000	Y		0.139
6)	Dichlorotetrafluoroethane	0	0.000	Y		0.040
7)	Vinyl Chloride	0	0.000	Y		0.038
8)	1,3-Butadiene	0	0.000	Y		0.058
	Ethylene oxide	0	0.000	Y		0.136
9)	Bromomethane	0	0.000	Y		0.035
10)	Chloroethane	0	0.000	Y		0.075
11)	Acetonitrile	0	0.000	Y		0.049
12)	Acrolein	100	0.047	Y	MAX	0.200
13)	Trichlorofluoromethane	0	0.000	Y		0.035
14)	Acrylonitrile	0	0.000	Y		0.032
15)	1,1-Dichloroethene	0	0.000	Y		0.036
16)	Methylene Chloride	0	0.000	Y		0.043
17)	Carbon Disulfide	326	0.018	Y		0.200
18)	Trichlorotrifluoroethane	0	0.000	Y		0.029
19)	trans-1,2-Dichloroethylene	0	0.000	Y		0.040
20)	1,1-Dichloroethane	0	0.000	Y		0.043
21)	Methyl tert-Butyl Ether	0	0.000	Y		0.031
22)	Chloroprene	0	0.000	Y		0.039
23)	cis-1,2-Dichloroethylene	0	0.000	Y		0.056
24)	Bromochloromethane	0	0.000	Y		0.040
25)	Chloroform	0	0.000	Y		0.039
26)	Ethyl tert-Butyl Ether	0	0.000	Y		0.033
27)	1,2-Dichloroethane	0	0.000	Y		0.042
28)	IS-1,4-Difluorobenzene	125398		NA		NA
29)	1,1,1-Trichloroethane	0	0.000	Y		0.041
30)	Benzene	56	0.004	Y		0.043
31)	Carbon Tetrachloride	0	0.000	Y		0.040
32)	tert-Amyl Methyl Ether	0	0.000	Y		0.037
33)	1,2-Dichloropropane	0	0.000	Y		0.061
34)	Ethyl Acrylate	0	0.000	Y		0.070
35)	Bromodichloromethane	0	0.000	Y		0.049
36)	Trichloroethylene	0	0.000	Y		0.045
37)	Methyl Methacrylate	0	0.000	Y		0.200
38)	cis-1,3-dichloropropene	0	0.000	Y		0.059
39)	Methyl Isobutyl Ketone	0	0.000	Y		0.071
40)	trans-1,3-Dichloropropene	0	0.000	Y		0.059
41)	1,1,2-Trichloroethane	0	0.000	Y		0.057
42)	IS-Chlorobenzene-d5	89178		NA		NA
43)	Toluene	0	0.000	Y		0.200
44)	Dibromochloromethane	0	0.000	Y		0.046
45)	1,2-Dibromoethane	0	0.000	Y		0.057
46)	n-Octane	0	0.000	Y		0.097
47)	Tetrachloroethylene	0	0.000	Y		0.044
48)	Chlorobenzene	0	0.000	Y		0.058
49)	Ethylbenzene	97	0.006	Y		0.077
50)	m,p-Xylene	52	0.004	Y		0.108
51)	Bromoform	0	0.000	Y		0.053
52)	Styrene	0	0.000	Y		0.109
53)	1,1,2,2-Tetrachloroethane	0	0.000	Y		0.063
54)	o-Xylene	111	0.009	Y		0.080
55)	1,3,5-Trimethylbenzene	0	0.000	Y		0.102
56)	1,2,4-Trimethylbenzene	49	0.004	Y		0.080
57)	m-Dichlorobenzene	0	0.000	Y		0.055
58)	p-Dichlorobenzene	0	0.000	Y		0.060
59)	o-Dichlorobenzene	0	0.000	Y		0.062
60)	1,2,4-Trichlorobenzene	0	0.000	Y		0.200
61)	Hexachloro-1,3-butadiene	0	0.000	Y		0.082

*All Blanks must be below 0.2 ppb or 3 times the MDL whichever value is lower

TO-15_BLANK_TEMPLATES_3-19-18
2018 BLANK
Y:\AIR TOX\TO-15 BLANK TEST\TO-15_BLANK_TEMPLATES_8-29-18.xlsx

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS006.D
Acq On : 19 Feb 2019 3:41 pm (#1); 19-Feb-19, 15:36:30 (#2)
Operator : MAH
Sample : B9B1907-BLK1 (Sig #1); B9B1908-BLK1 (Sig #2)
Misc : 80 ML 8L13001,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 20 14:02:50 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

2-20-19

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) IS-Hexane-d14	19.970	66	49101	4.7700 ppbv	-0.02
29) IS-1,4-Difluorobenzene	23.130	114	125398	4.9900 ppbv	-0.02
43) IS-Chlorobenzene-d5	30.078	117	89178	4.7400 ppbv	-0.04

System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D.	
3) Propylene	7.823	41	74	0.0148 ppbv #	46
4) Dichlorodifluoromethane	0.000	85	0	N.D.	
5) Chloromethane	0.000	50	0	N.D.	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D.	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D.	
9) Ethylene oxide	0.000	29	0	N.D. d	
10) Bromomethane	0.000	94	0	N.D.	
11) Chloroethane	0.000	64	0	N.D.	
12) Acetonitrile	0.000	41	0	N.D.	
13) Acrolein	14.729	56	100	0.0466 ppbv #	70
14) Trichlorofluoromethane	0.000	101	0	N.D.	
15) Acrylonitrile	0.000	53	0	N.D.	
16) 1,1-Dichloroethene	0.000	61	0	N.D.	
17) Methylene Chloride	0.000	49	0	N.D.	
18) Carbon Disulfide	16.932	76	326	0.0185 ppbv #	86
19) Trichlorotrifluoroethane	0.000	101	0	N.D.	
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) 1,1-Dichloroethane	0.000	63	0	N.D.	
22) Methyl tert-Butyl Ether	0.000	73	0	N.D.	
23) Chloroprene	0.000	53	0	N.D.	
24) cis-1,2-Dichloroethylene	0.000	61	0	N.D. d	
25) Bromochloromethane	0.000	128	0	N.D.	
26) Chloroform	0.000	83	0	N.D.	
27) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
28) 1,2-Dichloroethane	0.000	62	0	N.D.	
30) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
31) Benzene	22.516	78	56	0.0042 ppbv #	53
32) Carbon Tetrachloride	0.000	117	0	N.D.	
33) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) 1,2-Dichloropropane	0.000	63	0	N.D.	
35) Ethyl Acrylate	0.000	55	0	N.D.	
36) Bromodichloromethane	0.000	83	0	N.D.	
37) Trichloroethylene	0.000	130	0	N.D.	
38) Methyl Methacrylate	0.000	41	0	N.D. d	
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	0.000	43	0	N.D. d	
41) trans-1,3-Dichloropropene	0.000	75	0	N.D.	
42) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
44) Toluene	0.000	91	0	N.D.	
45) Dibromochloromethane	0.000	129	0	N.D.	
46) 1,2-Dibromoethane	0.000	107	0	N.D.	
47) n-Octane	0.000	43	0	N.D.	
48) Tetrachloroethylene	0.000	166	0	N.D.	
49) Chlorobenzene	0.000	112	0	N.D.	
50) Ethylbenzene	30.898	91	97	0.0063 ppbv #	42

ED_002475_00000244-00049

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS006.D
Acq On : 19 Feb 2019 3:41 pm (#1); 19-Feb-19, 15:36:30 (#2)
Operator : MAH
Sample : B9B1907-BLK1 (Sig #1); B9B1908-BLK1 (Sig #2)
Misc : 80 ML 8L13001,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 20 14:02:50 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	31.204	91	52	0.0040 ppbv #	30
52) Bromoform	0.000	173	0	N.D.	
53) Styrene	0.000	104	0	N.D.	
54) 1,1,2,2-Tetrachloroethane	0.000	83	0	N.D.	
55) o-Xylene	32.101	91	111	0.0087 ppbv	97
56) 1,3,5-Trimethylbenzene	0.000	105	0	N.D.	
57) 1,2,4-Trimethylbenzene	35.828	105	49	0.0041 ppbv #	32
58) m-Dichlorobenzene	0.000	146	0	N.D.	
59) p-Dichlorobenzene	0.000	146	0	N.D.	
60) o-Dichlorobenzene	0.000	146	0	N.D.	
61) 1,2,4-Trichlorobenzene	0.000	180	0	N.D.	
62) Hexachloro-1,3-butadiene	0.000	225	0	N.D.	

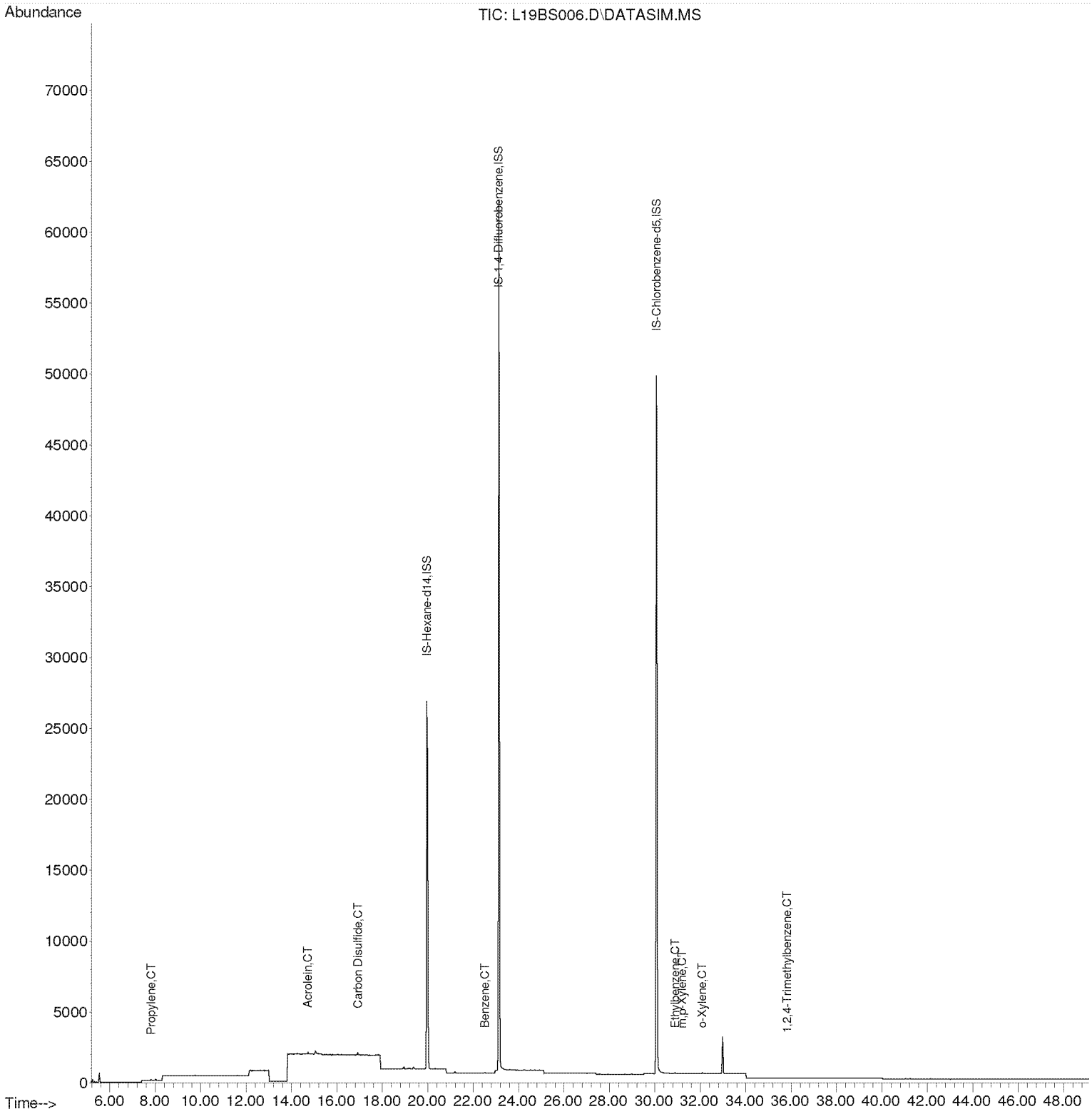
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ED_002475_00000244-00050

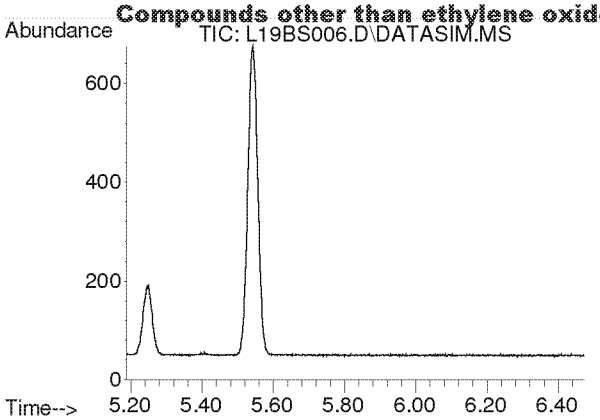
Compounds other than ethylene oxide were not quantitated.

Data Path : Y:\MASS SPEC 1 DATA\L19BS\
Data File : L19BS006.D
Acq On : 19 Feb 2019 3:41 pm
Operator : MAH
Sample : B9B1907-BLK1
Misc : 80 ML 8L13001,
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 20 13:52:08 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration



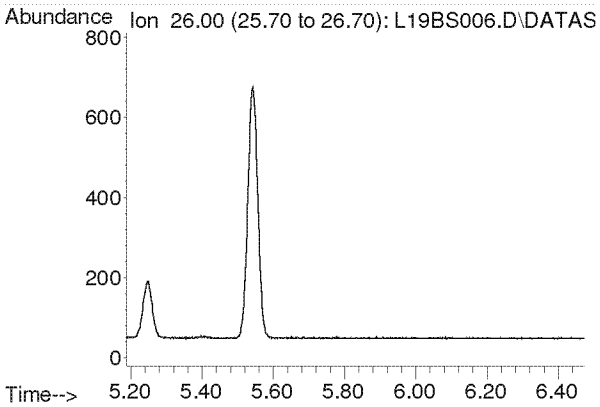
Compounds other than ethylene oxide were not quantitated.

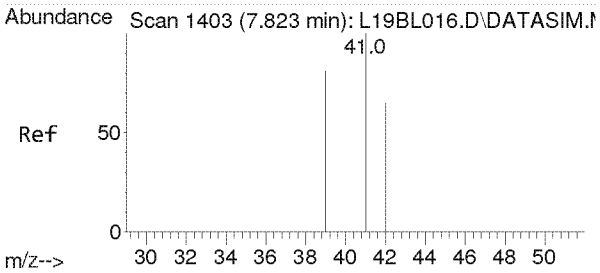


#2
Acetylene
Concen: N.D.
Expected RT: 5.40 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 26

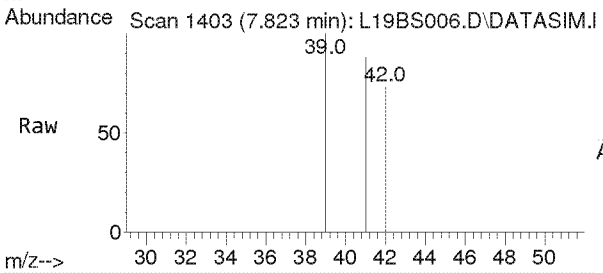


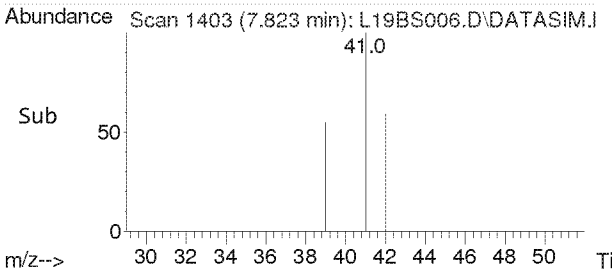


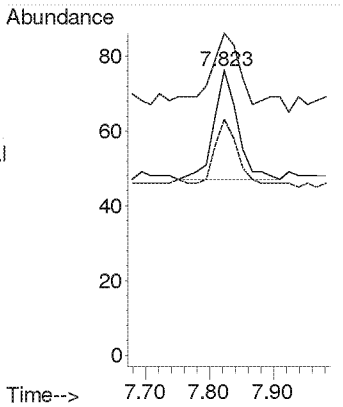
#3
Propylene
Concen: 0.015 ppbv
RT: 7.823 min Scan# 1403
Delta R.T. 0.000 min
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 41 Resp: 74

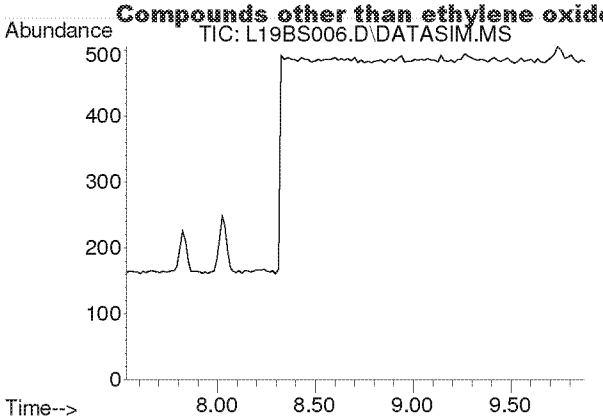
Ion	Ratio	Lower	Upper
41	100		
39	54.1	64.2	96.2#
42	0.0	52.6	79.0#







Compounds other than ethylene oxide were not quantitated.

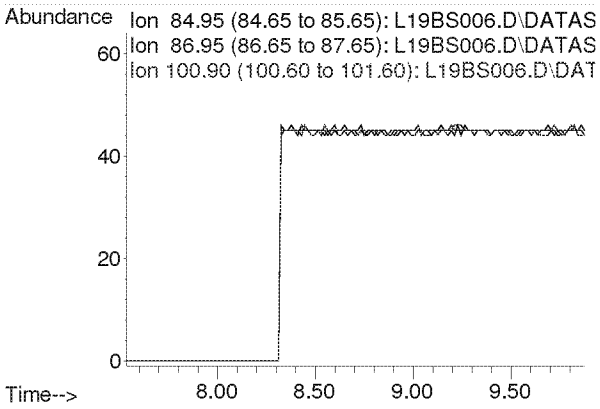


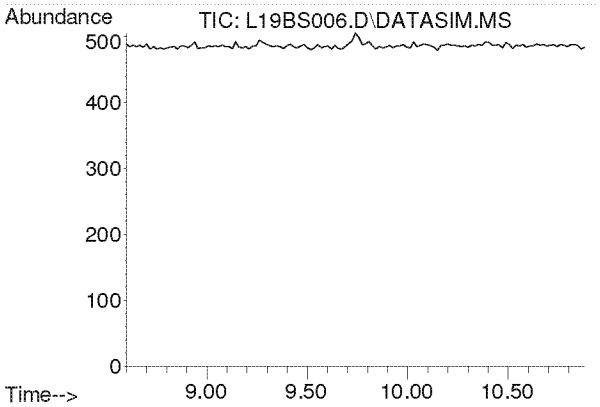
#4
Dichlorodifluoromethane
Concen: N.D.
Expected RT: 8.68 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 85

Sig	Exp Ratio
85	100
87	32.5
101	9.1



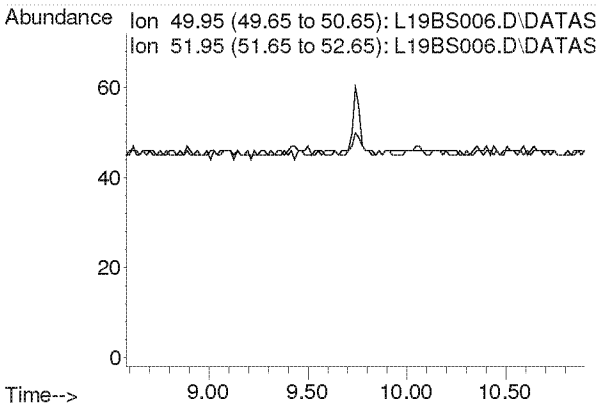


#5
Chloromethane
Concen: N.D.
Expected RT: 9.74 min

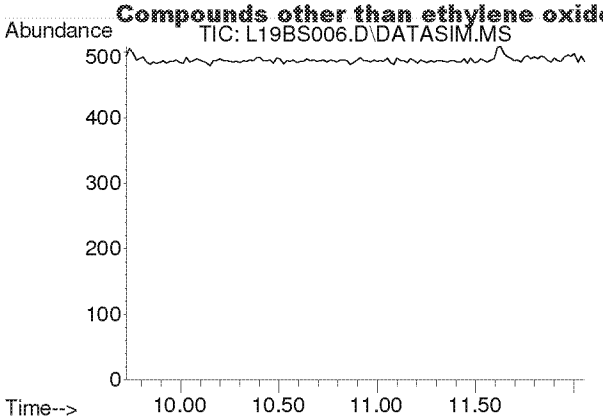
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 50

Sig	Exp Ratio
50	100
52	32.6



Compounds other than ethylene oxide were not quantitated.

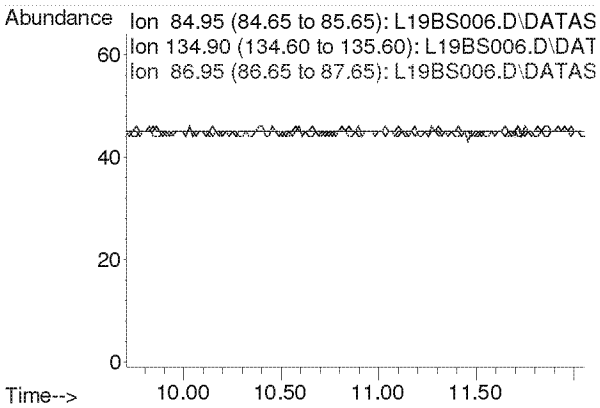


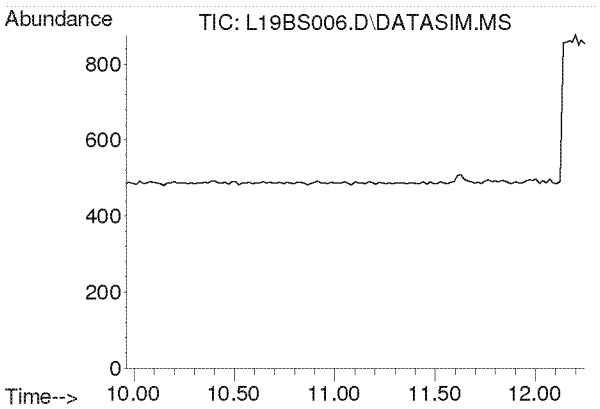
#6
Dichlorotetrafluoroethane
Concen: N.D.
Expected RT: 10.86 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 85

Sig	Exp Ratio
85	100
135	79.0
87	32.4



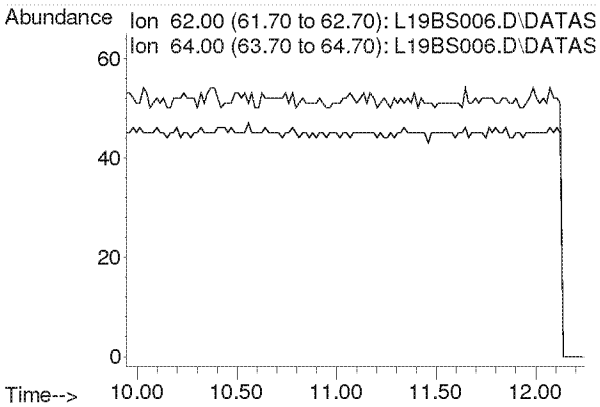


#7
Vinyl Chloride
Concen: N.D.
Expected RT: 11.10 min

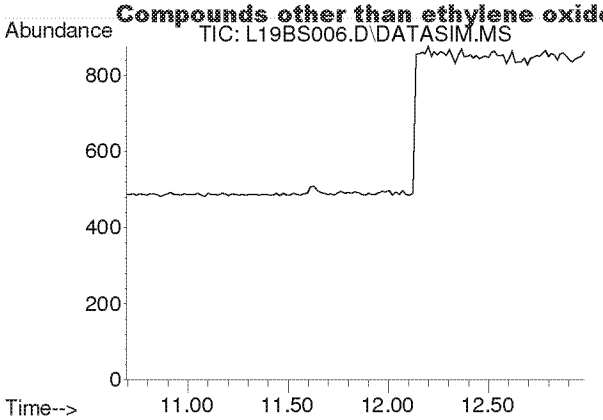
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	31.7



Compounds other than ethylene oxide were not quantitated.

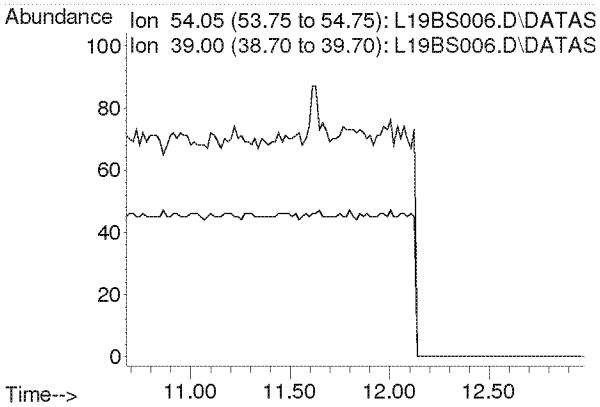


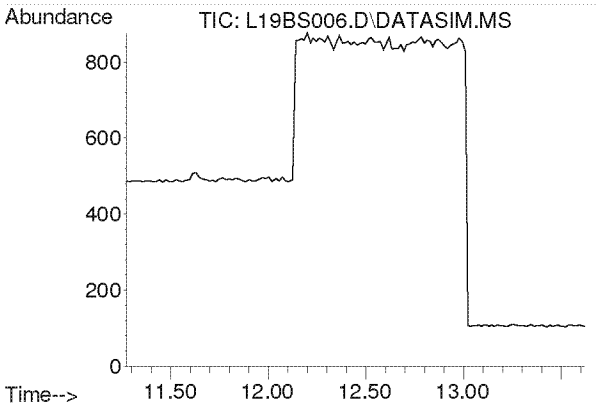
#8
1,3-Butadiene
Concen: N.D.
Expected RT: 11.78 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 54

Sig	Exp Ratio
54	100
39	102.0



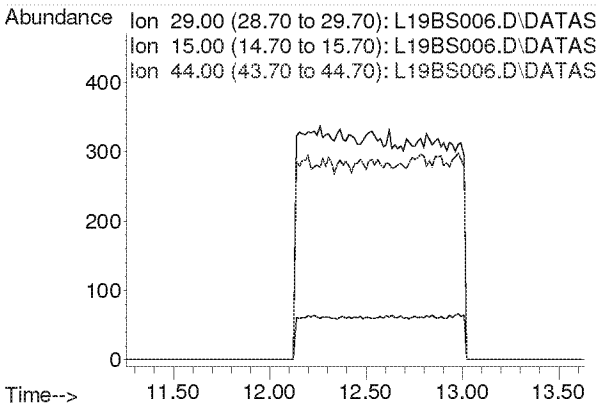


#9
Ethylene oxide
Concen: N.D.
Expected RT: 12.38 min

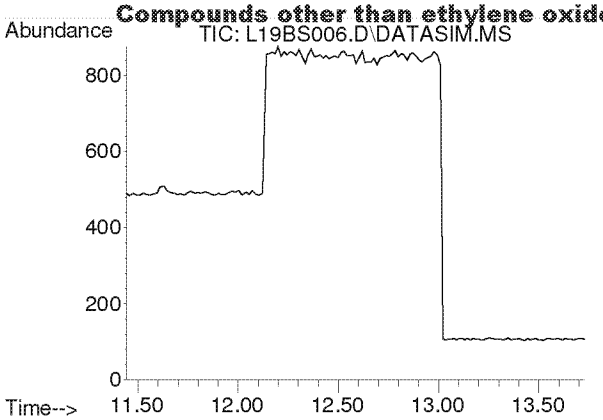
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 29

Sig	Exp Ratio
29	100
15	20.0
44	81.8



Compounds other than ethylene oxide were not quantitated.

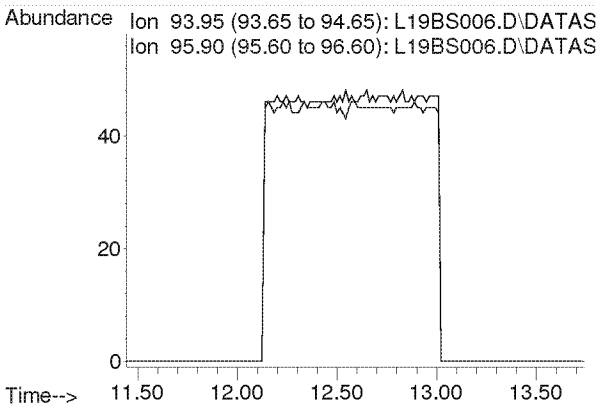


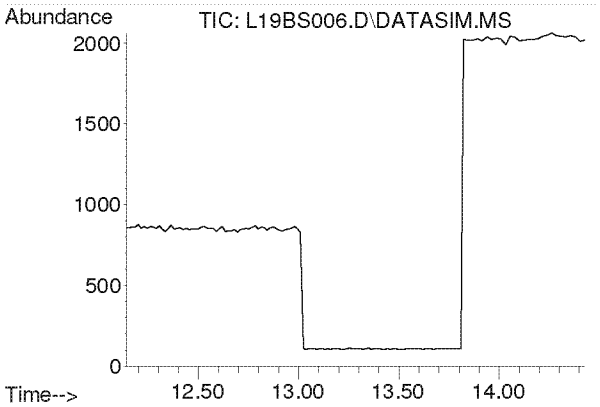
#10
Bromomethane
Concen: N.D.
Expected RT: 12.59 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 94

Sig	Exp Ratio
94	100
96	94.4



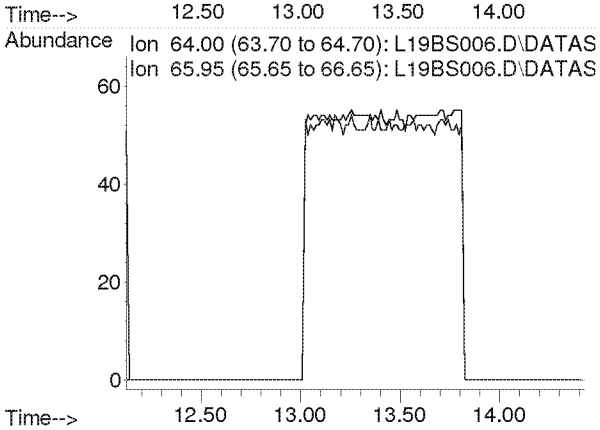


#11
Chloroethane
Concen: N.D.
Expected RT: 13.28 min

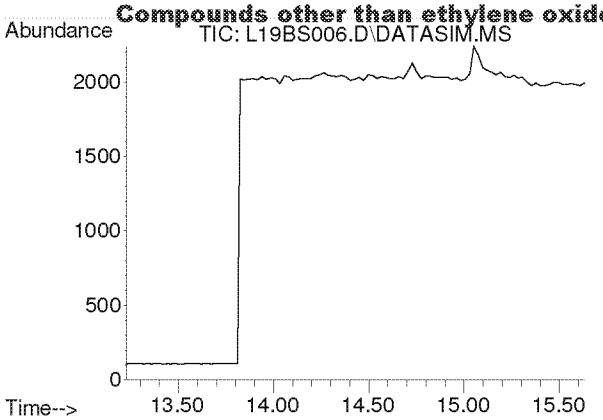
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



Compounds other than ethylene oxide were not quantitated.

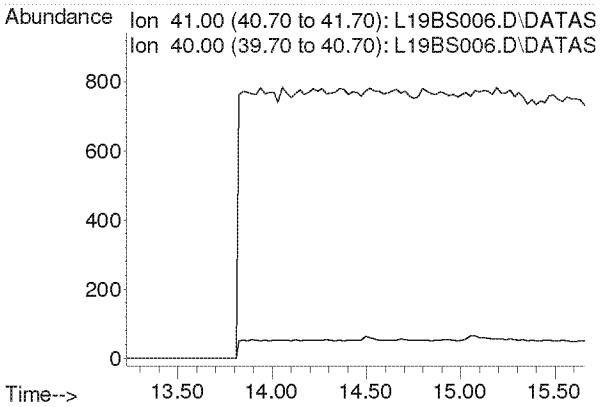


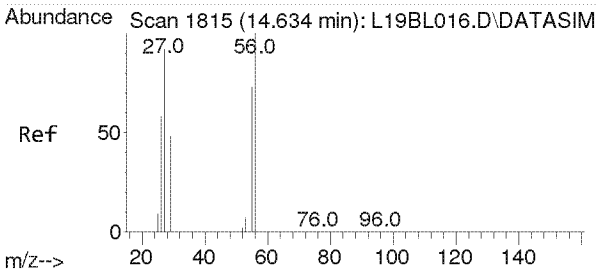
#12
Acetonitrile
Concen: N.D.
Expected RT: 14.36 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 41

Sig	Exp Ratio
41	100
40	52.8

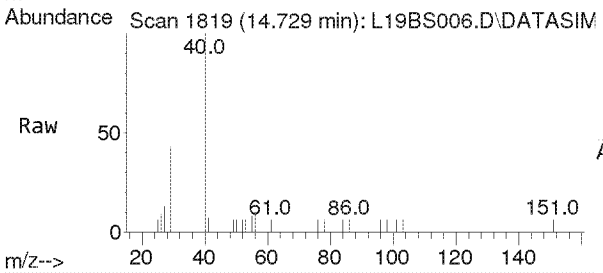


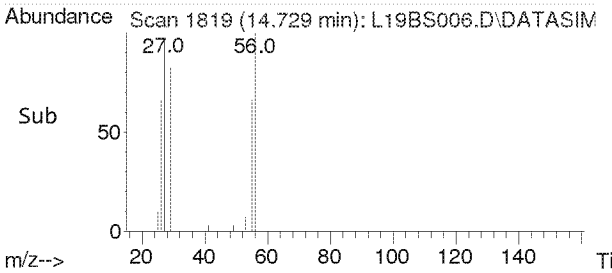


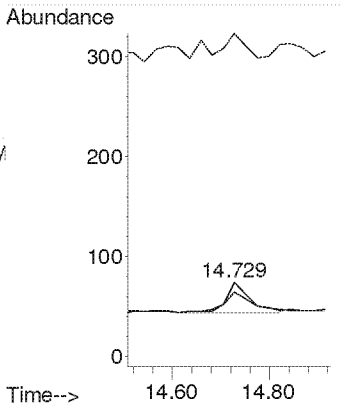
#13
Acrolein
Concen: 0.047 ppbv
RT: 14.729 min Scan# 1819
Delta R.T. 0.095 min
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 56 Resp: 100

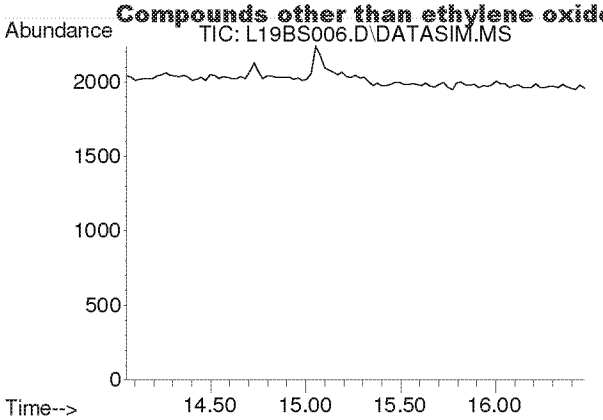
Ion	Ratio	Lower	Upper
56	100		
55	82.0	60.8	91.2
29	100.0	43.8	65.6#







Compounds other than ethylene oxide were not quantitated.

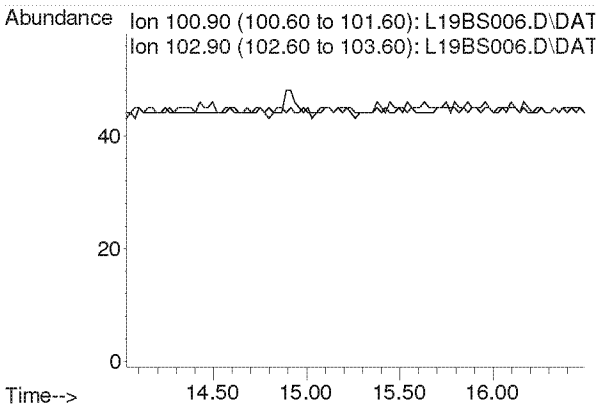


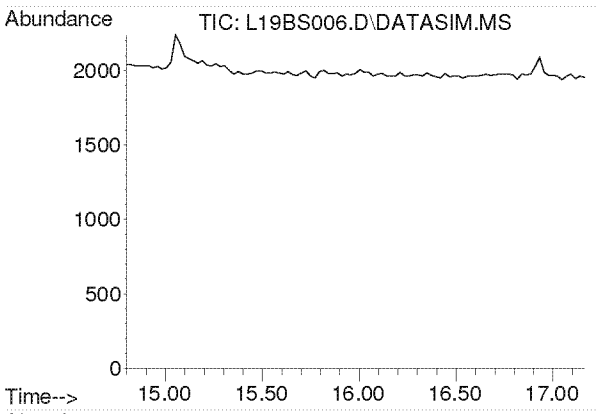
#14
Trichlorofluoromethane
Concen: N.D.
Expected RT: 15.19 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 101

Sig	Exp Ratio
101	100
103	64.6



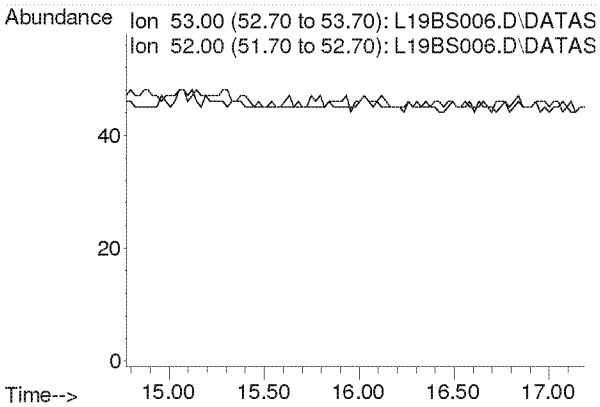


#15
Acrylonitrile
Concen: N.D.
Expected RT: 15.93 min

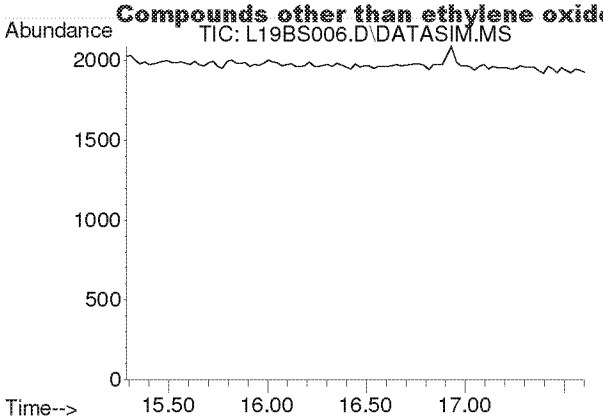
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
52	86.9



Compounds other than ethylene oxide were not quantitated.

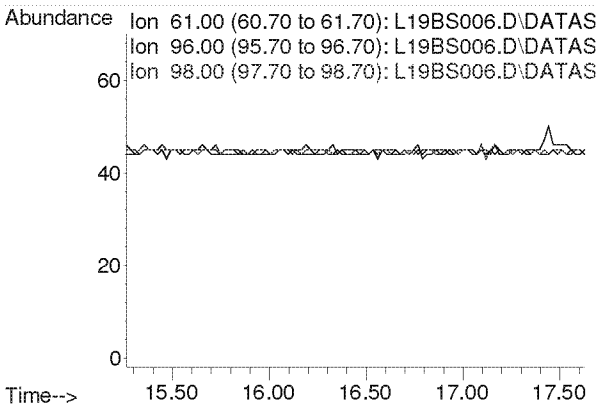


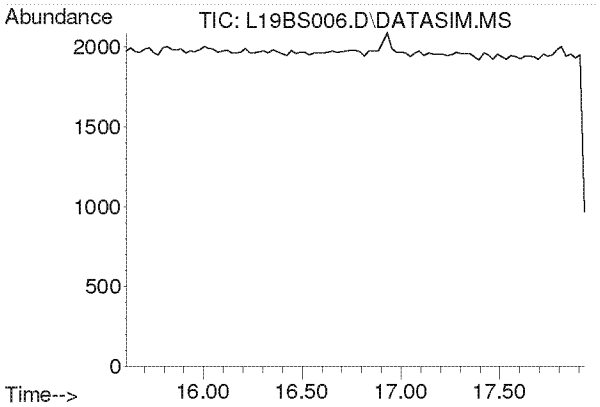
#16
1,1-Dichloroethene
Concen: N.D.
Expected RT: 16.42 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	59.1
98	38.2



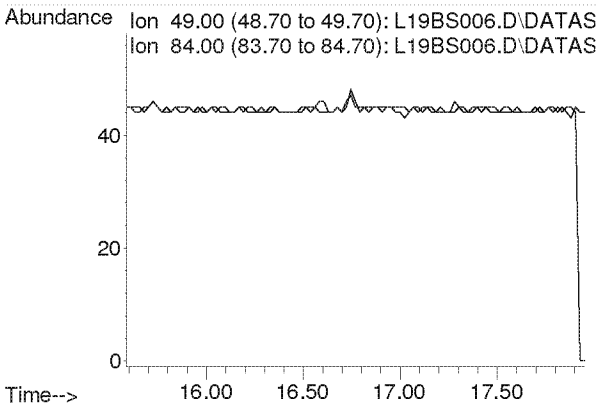


#17
Methylene Chloride
Concen: N.D.
Expected RT: 16.74 min

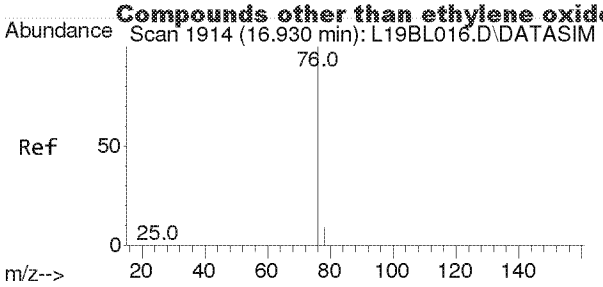
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 49

Sig	Exp Ratio
49	100
84	77.2



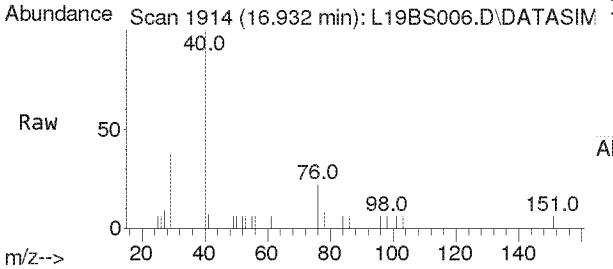
Compounds other than ethylene oxide were not quantitated.

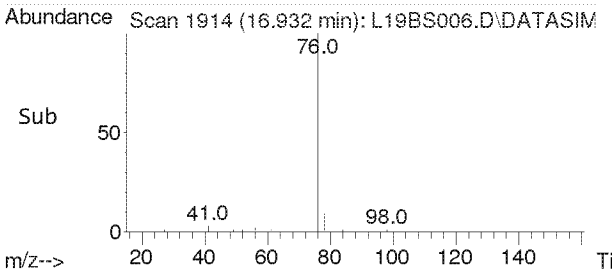


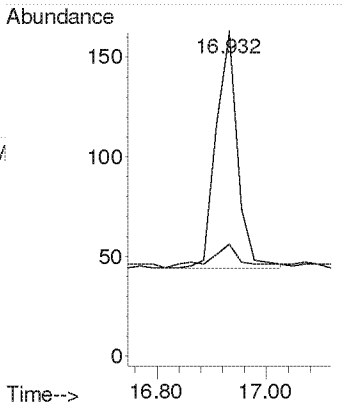
#18
Carbon Disulfide
Concen: 0.018 ppbv
RT: 16.932 min Scan# 1914
Delta R.T. 0.002 min
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

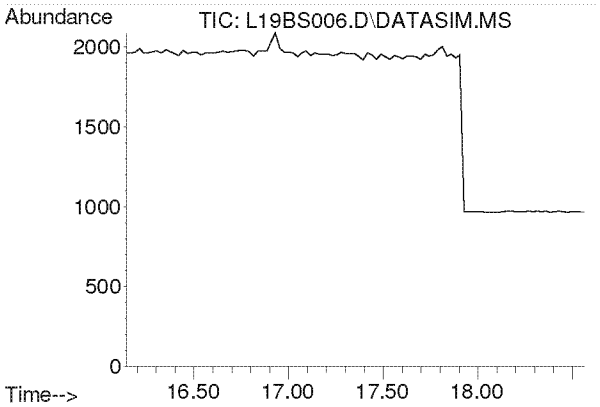
Tgt Ion: 76 Resp: 326

Ion	Ratio	Lower	Upper
76	100		
78	14.1	7.4	11.0#







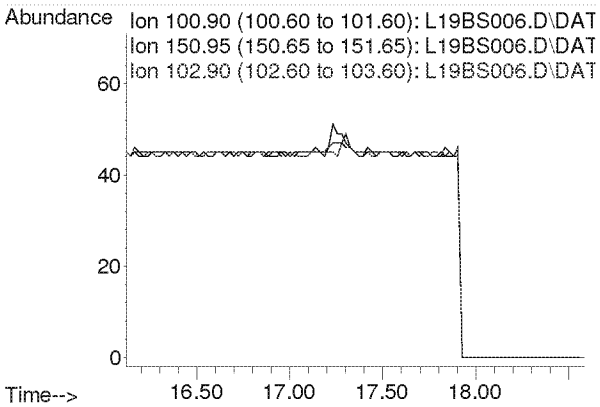


#19
Trichlorotrifluoroethane
Concen: N.D.
Expected RT: 17.28 min

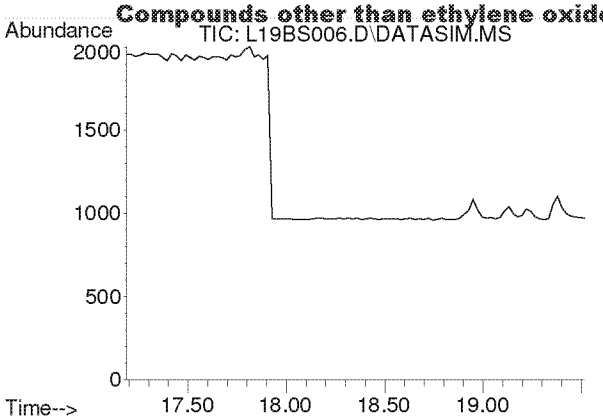
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 101

Sig	Exp Ratio
101	100
151	94.8
103	63.9



Compounds other than ethylene oxide were not quantitated.

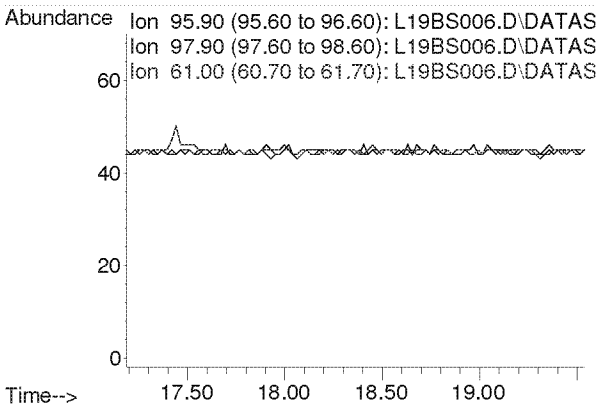


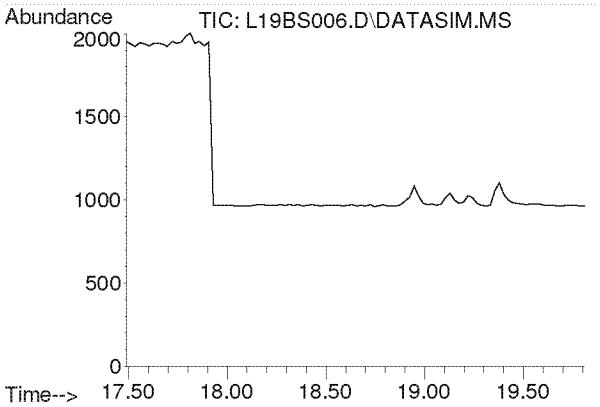
#20
trans-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 18.34 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 96

Sig	Exp Ratio
96	100
98	64.4
61	153.6



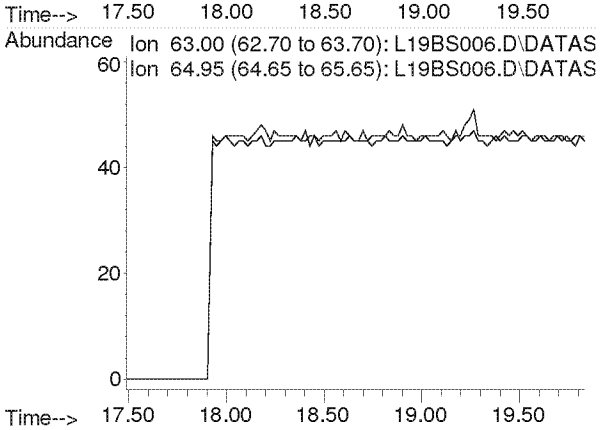


#21
1,1-Dichloroethane
Concen: N.D.
Expected RT: 18.63 min

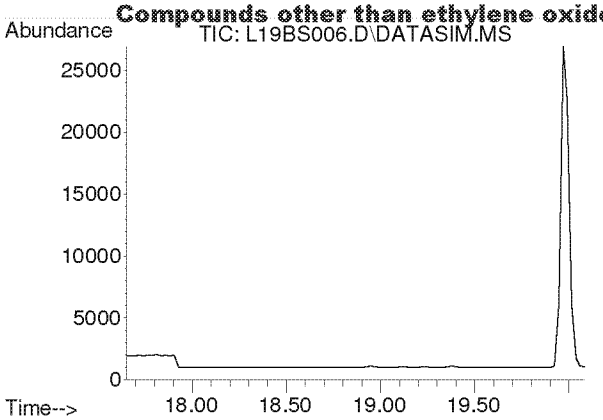
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 63

Sig	Exp Ratio
63	100
65	31.7



Compounds other than ethylene oxide were not quantitated.

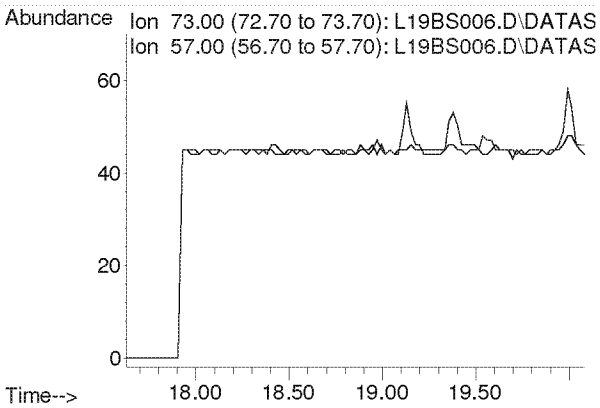


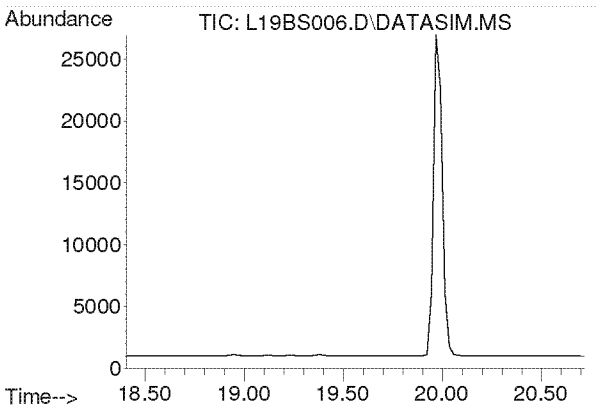
#22
Methyl tert-Butyl Ether
Concen: N.D.
Expected RT: 18.79 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
57	22.5



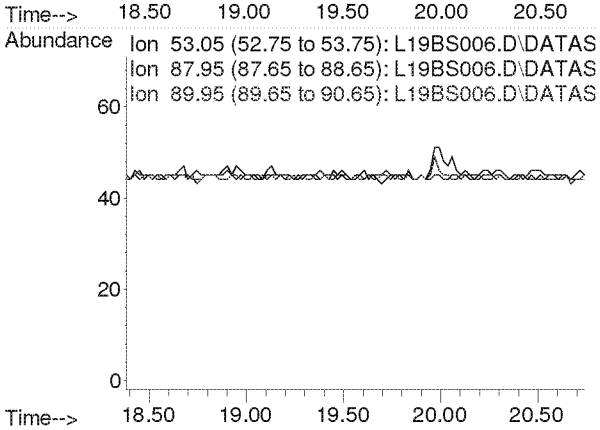


#23
Chloroprene
Concen: N.D.
Expected RT: 19.54 min

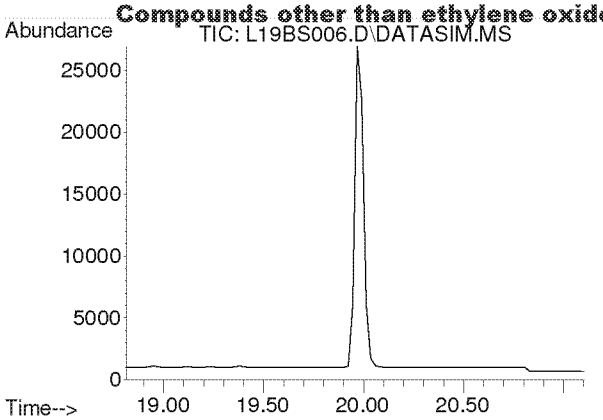
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	53.3
90	17.4



Compounds other than ethylene oxide were not quantitated.

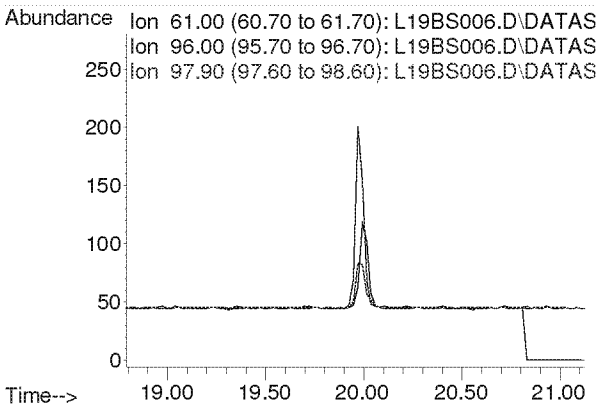


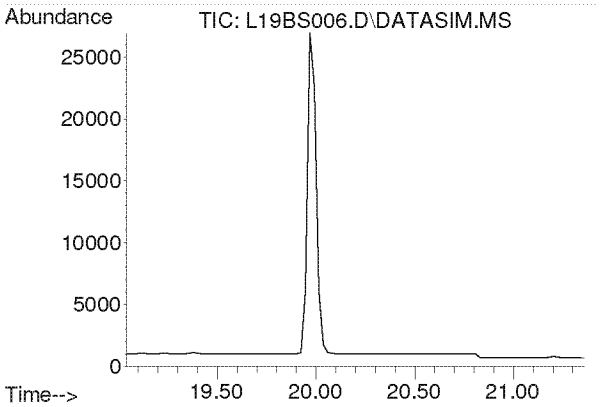
#24
cis-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 19.95 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	73.8
98	47.0



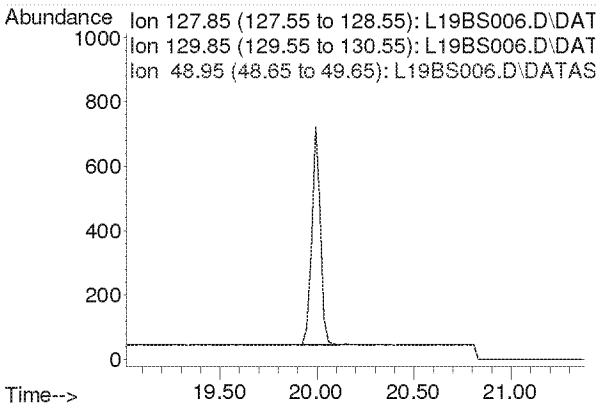


#25
Bromochloromethane
Concen: N.D.
Expected RT: 20.17 min

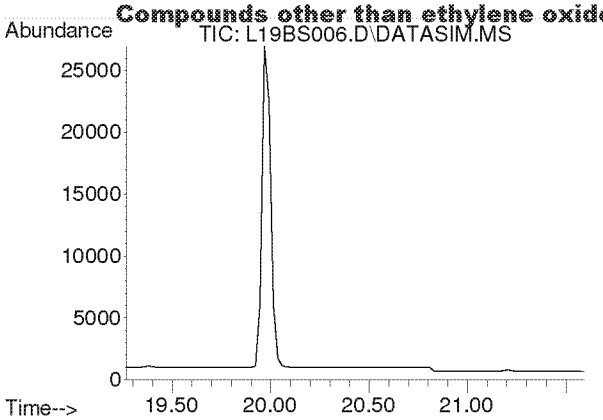
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 128

Sig	Exp Ratio
128	100
130	129.1
49	160.4



Compounds other than ethylene oxide were not quantitated.

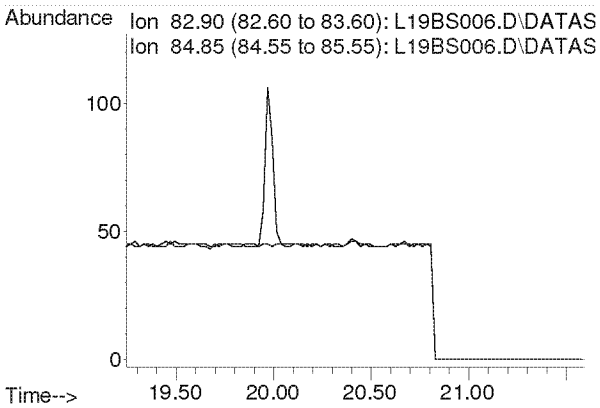


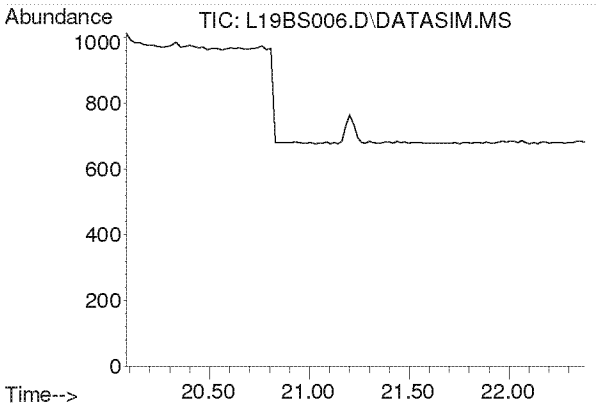
#26
Chloroform
Concen: N.D.
Expected RT: 20.40 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.4



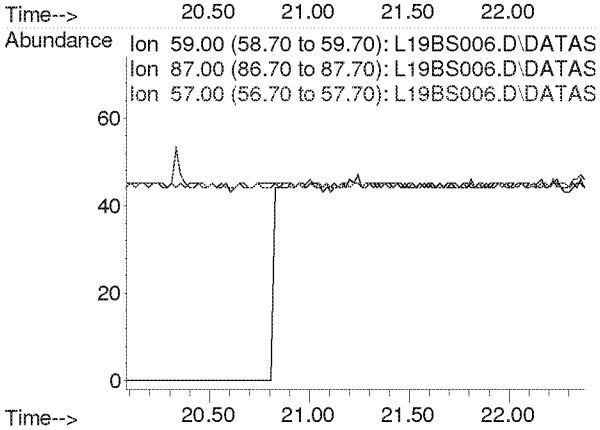


#27
Ethyl tert-Butyl Ether
Concen: N.D.
Expected RT: 21.18 min

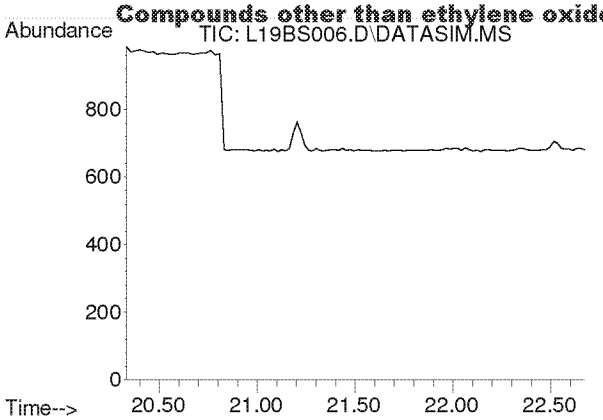
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 59

Sig	Exp Ratio
59	100
87	39.4
57	33.2



Compounds other than ethylene oxide were not quantitated.

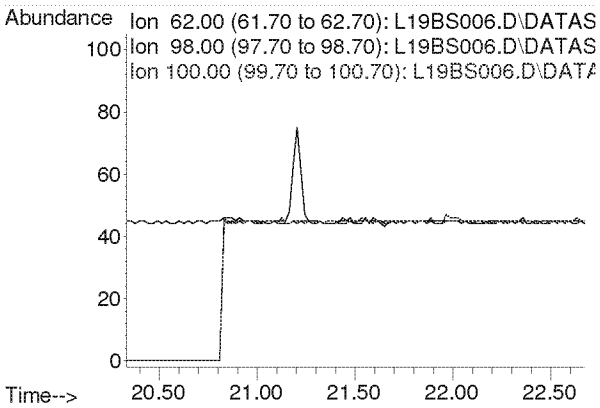


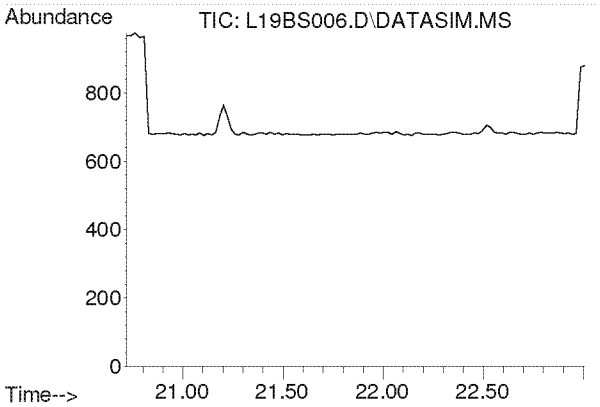
#28
1,2-Dichloroethane
Concen: N.D.
Expected RT: 21.48 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 62

Sig	Exp Ratio
62	100
98	6.3
100	4.0



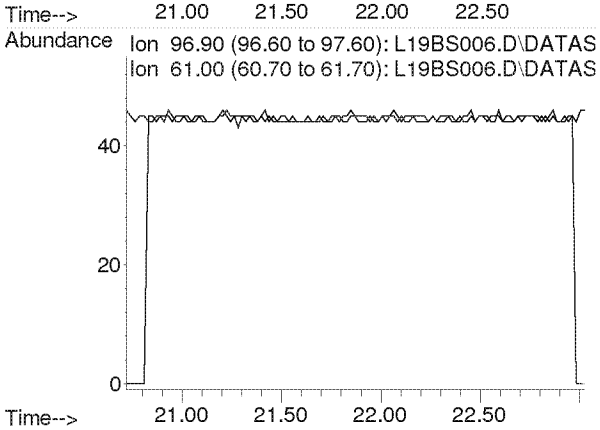


#30
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 21.87 min

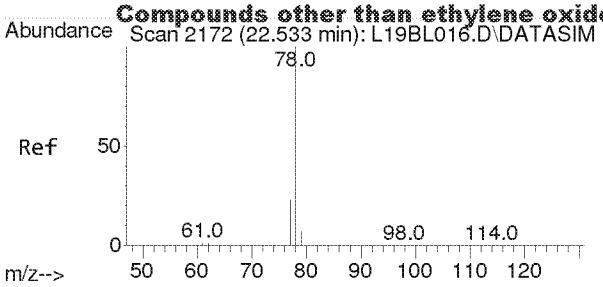
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 97

Sig	Exp Ratio
97	100
61	62.1



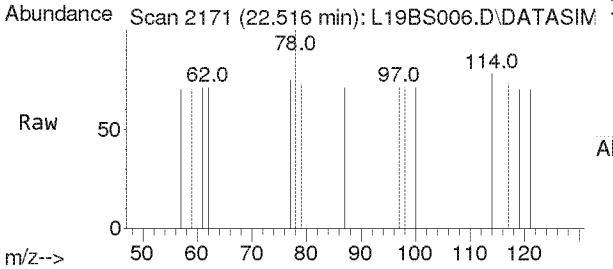
Compounds other than ethylene oxide were not quantitated.

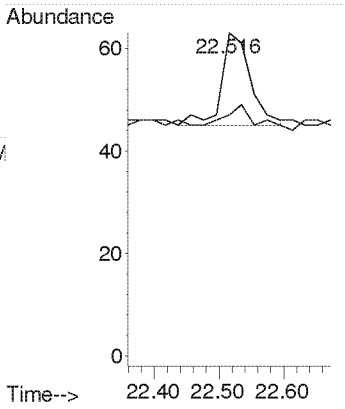


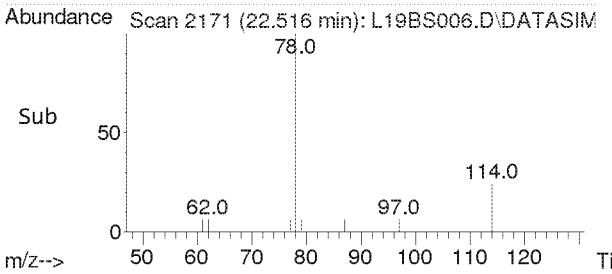
#31
Benzene
Concen: 0.004 ppbv
RT: 22.516 min Scan# 2171
Delta R.T. -0.017 min
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

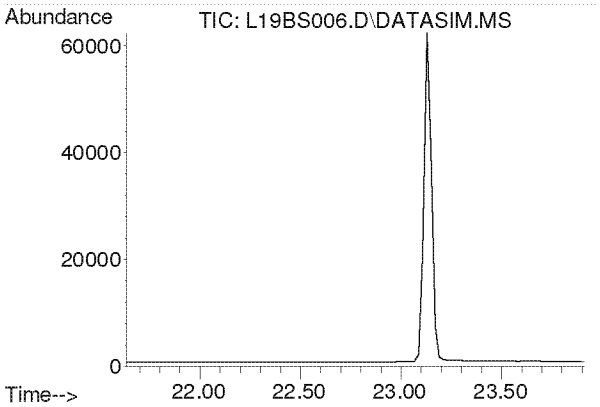
Tgt Ion: 78 Resp: 56

Ion	Ratio	Lower	Upper
78	100		
77	0.0	18.2	27.4#







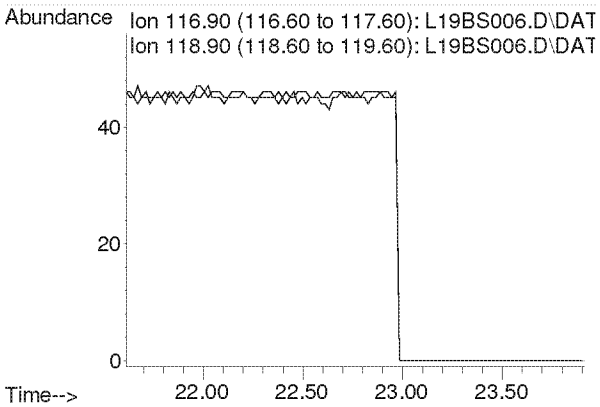


#32
Carbon Tetrachloride
Concen: N.D.
Expected RT: 22.77 min

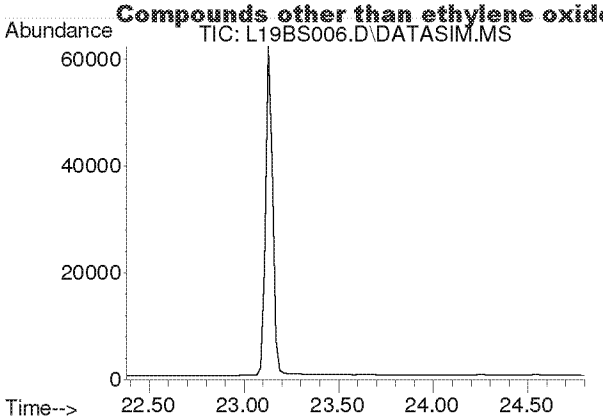
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 117

Sig	Exp Ratio
117	100
119	96.3



Compounds other than ethylene oxide were not quantitated.

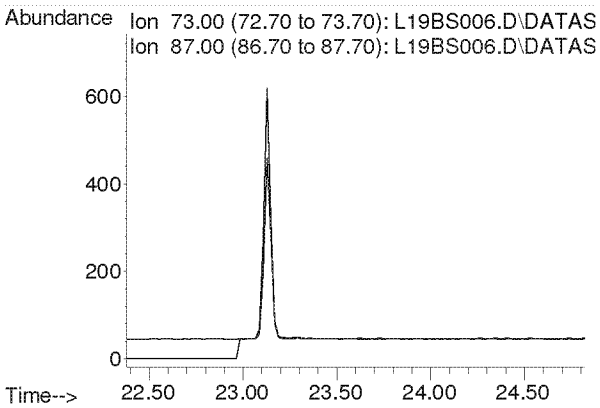


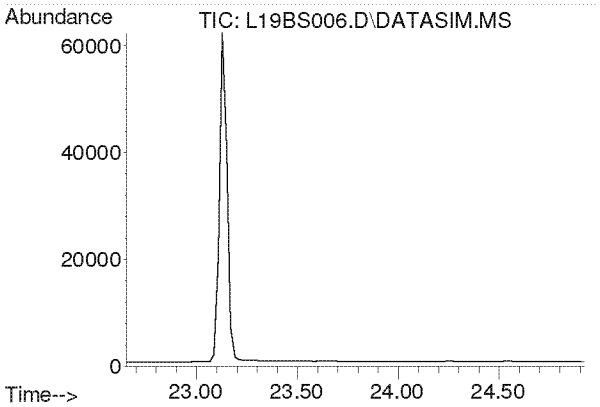
#33
tert-Amyl Methyl Ether
Concen: N.D.
Expected RT: 23.52 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 73

Sig	Exp Ratio
73	100
87	25.1



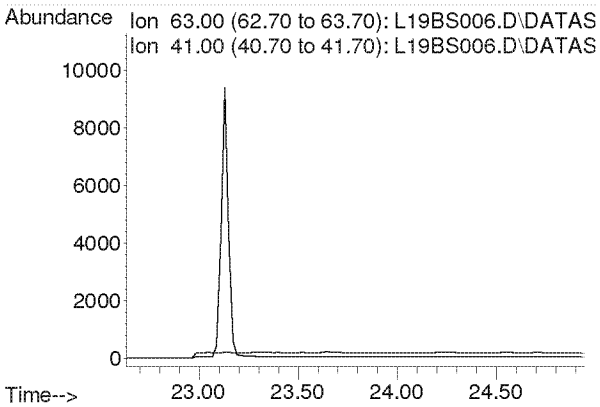


#34
1,2-Dichloropropane
Concen: N.D.
Expected RT: 23.79 min

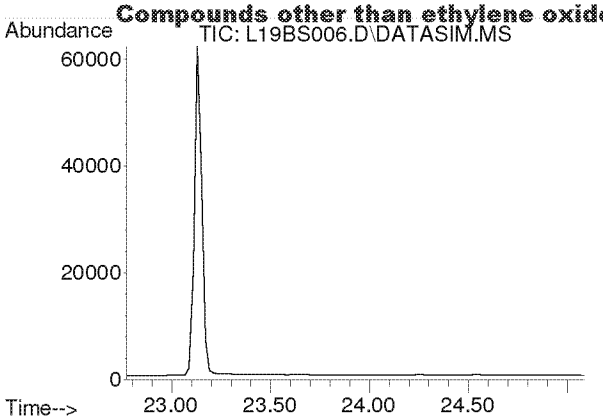
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	219.9



Compounds other than ethylene oxide were not quantitated.

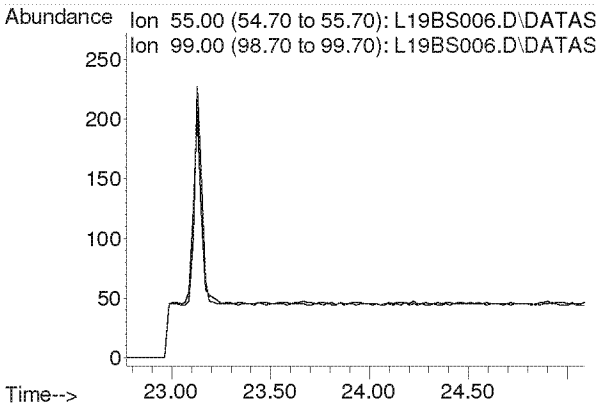


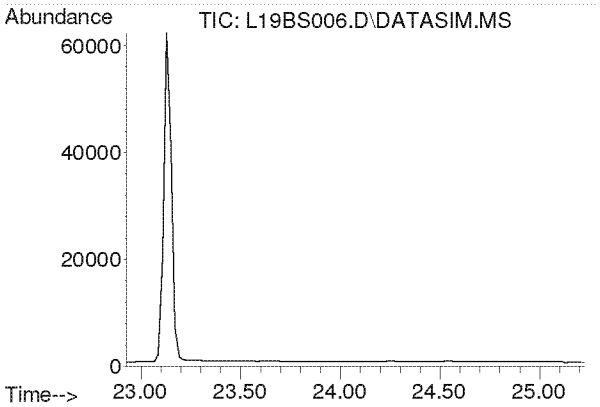
#35
Ethyl Acrylate
Concen: N.D.
Expected RT: 23.89 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 55

Sig	Exp Ratio
55	100
99	6.3



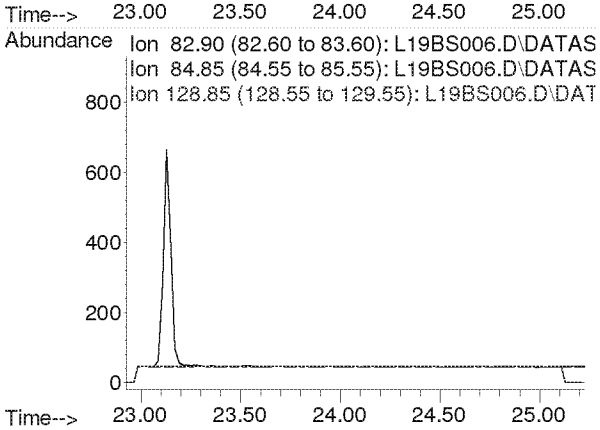


#36
Bromodichloromethane
Concen: N.D.
Expected RT: 24.08 min

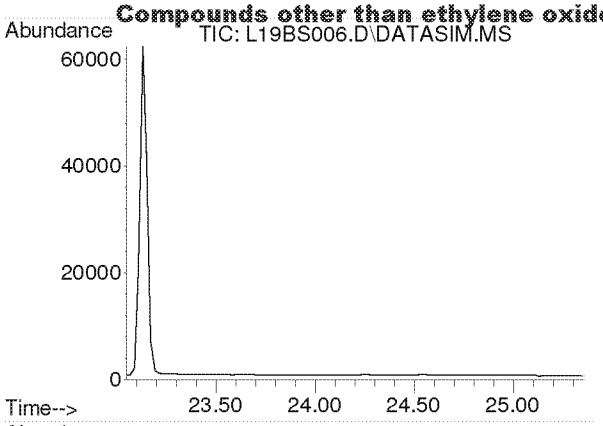
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.7
129	12.4



Compounds other than ethylene oxide were not quantitated.

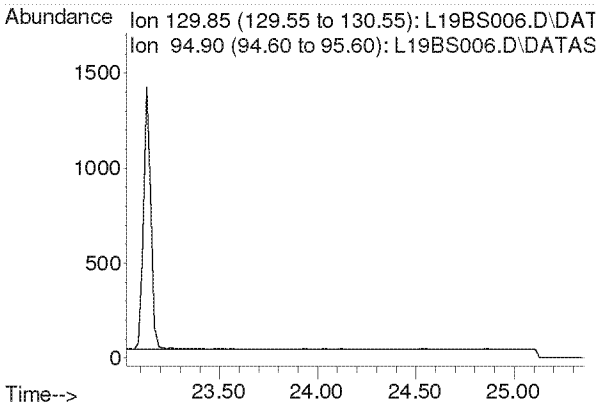


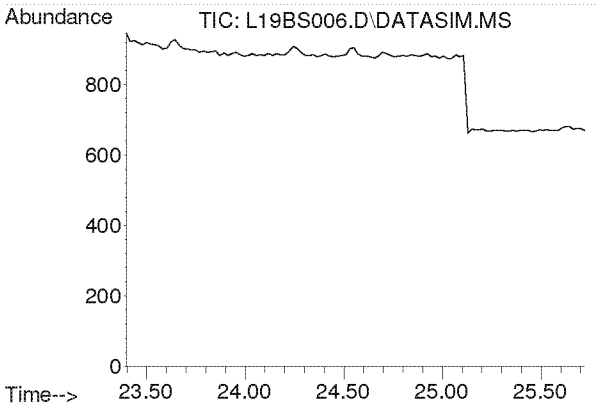
#37
Trichloroethylene
Concen: N.D.
Expected RT: 24.18 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 130

Sig	Exp Ratio
130	100
95	106.1



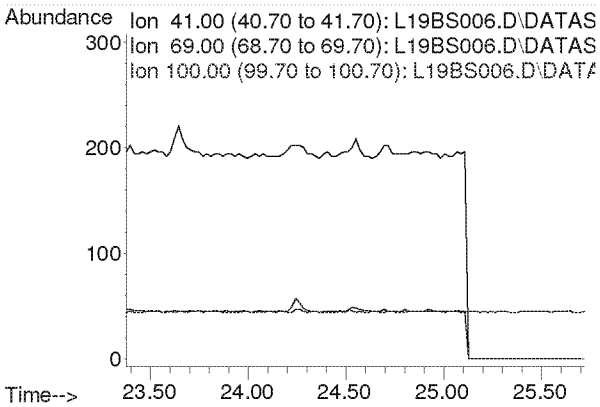


#38
Methyl Methacrylate
Concen: N.D.
Expected RT: 24.53 min

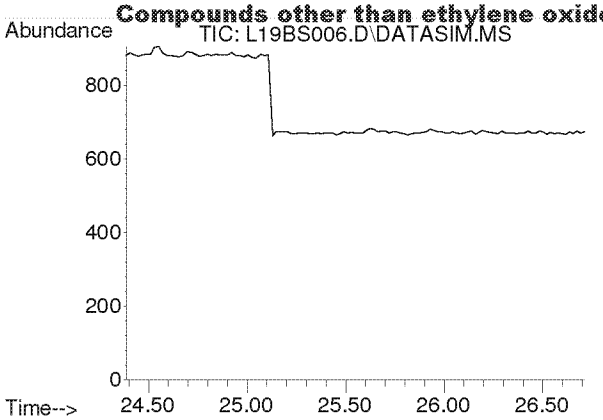
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 41

Sig	Exp Ratio
41	100
69	21.0
100	5.6



Compounds other than ethylene oxide were not quantitated.

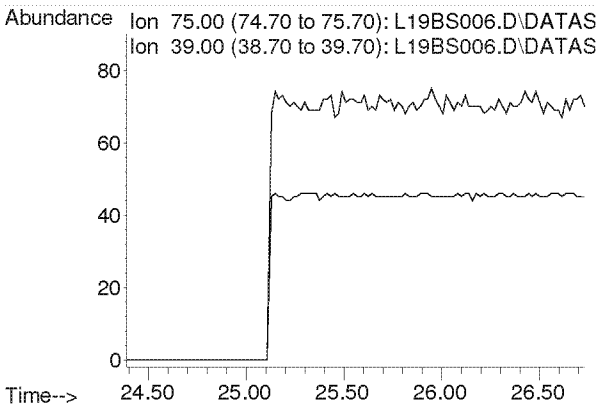


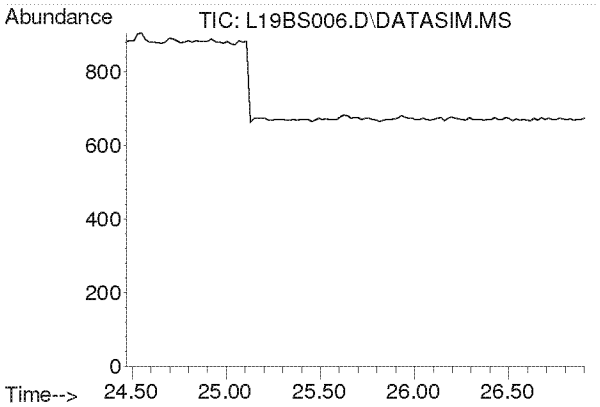
#39
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 25.53 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	54.2



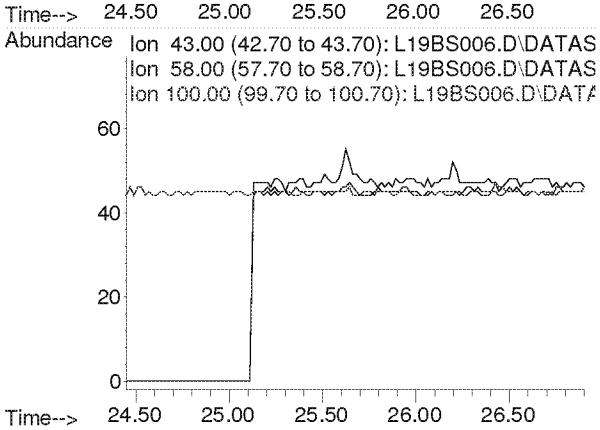


#40
Methyl Isobutyl Ketone
Concen: N.D.
Expected RT: 25.60 min

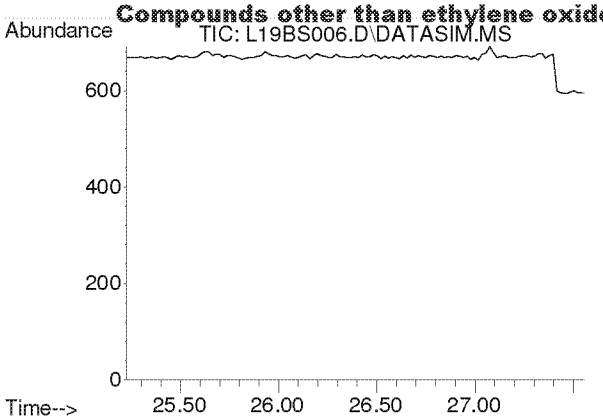
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	35.0
100	8.7



Compounds other than ethylene oxide were not quantitated.

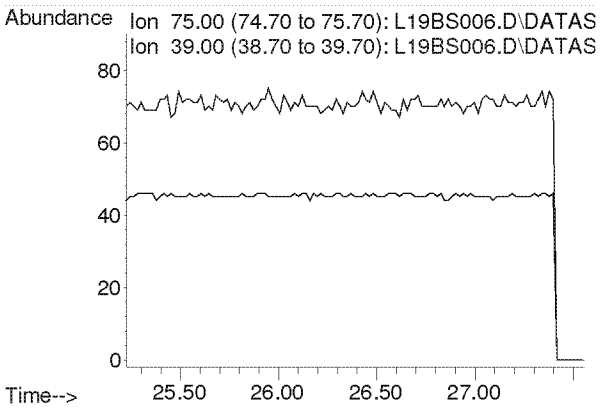


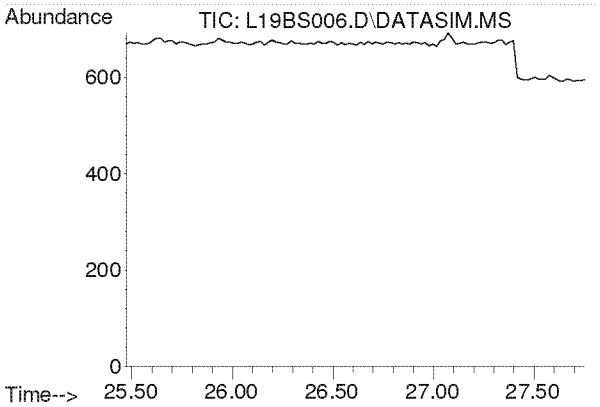
#41
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 26.37 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	53.6



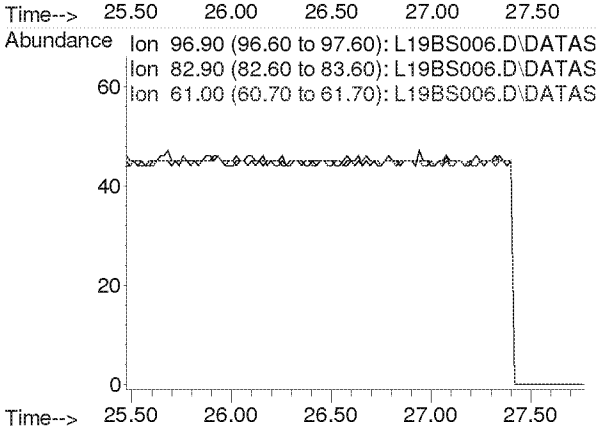


#42
1,1,2-Trichloroethane
Concen: N.D.
Expected RT: 26.62 min

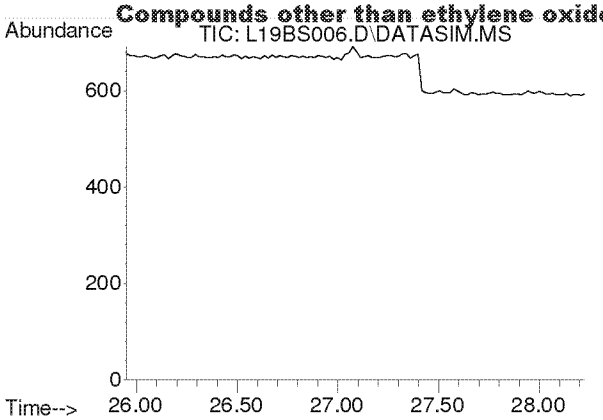
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 97

Sig	Exp Ratio
97	100
83	94.2
61	62.2



Compounds other than ethylene oxide were not quantitated.

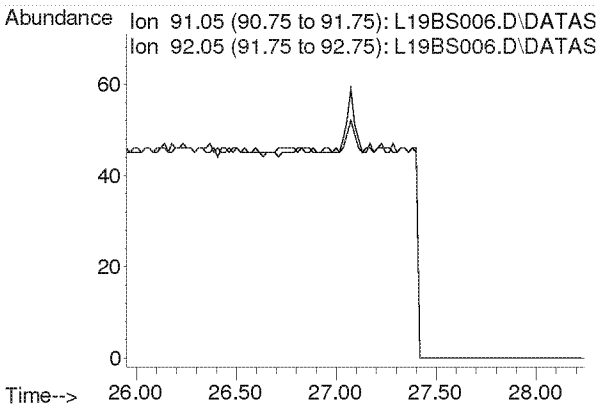


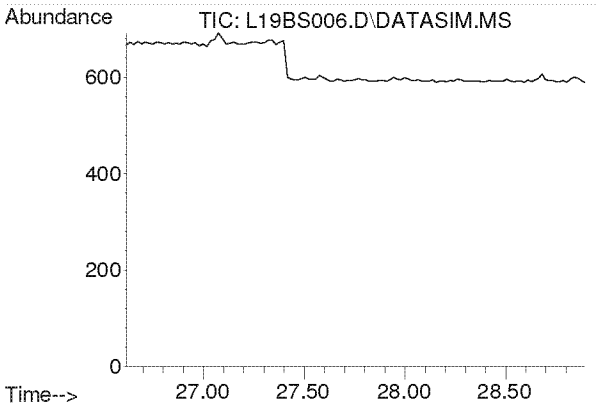
#44
Toluene
Concen: N.D.
Expected RT: 27.09 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	52.5



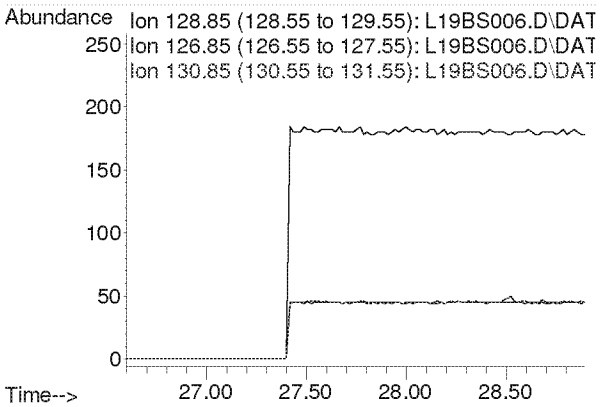


#45
Dibromochloromethane
Concen: N.D.
Expected RT: 27.75 min

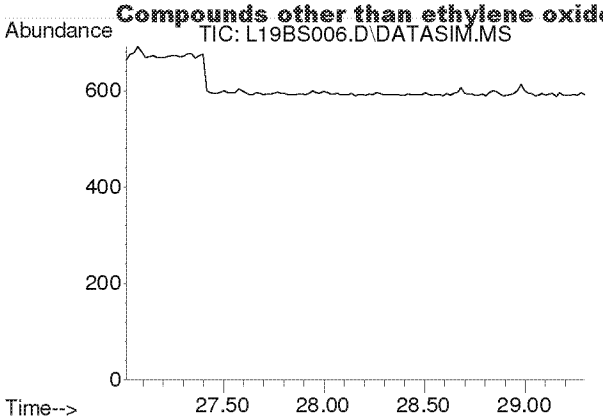
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 129

Sig	Exp Ratio
129	100
127	19.3
131	6.0



Compounds other than ethylene oxide were not quantitated.

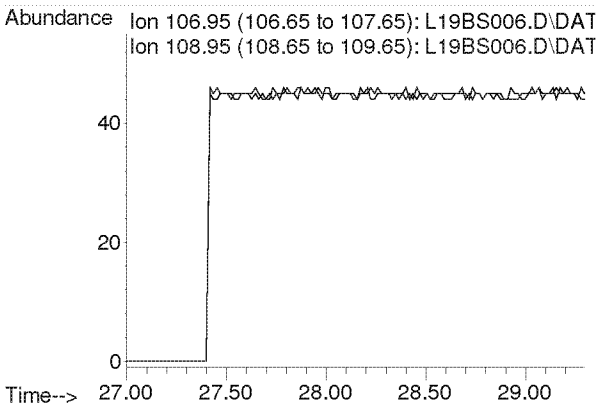


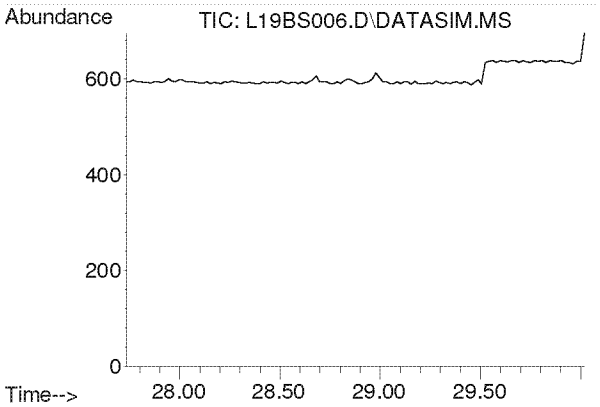
#46
1,2-Dibromoethane
Concen: N.D.
Expected RT: 28.15 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 107

Sig	Exp Ratio
107	100
109	94.2



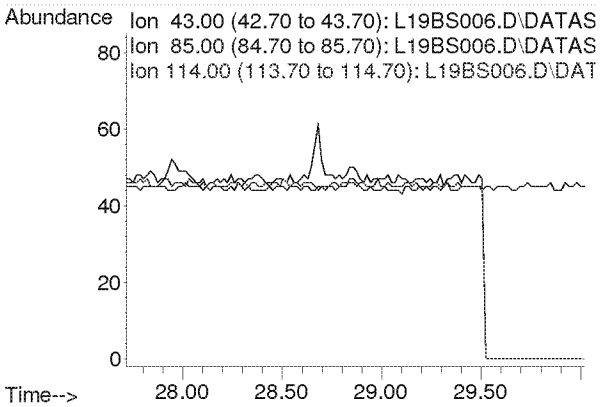


#47
n-Octane
Concen: N.D.
Expected RT: 28.87 min

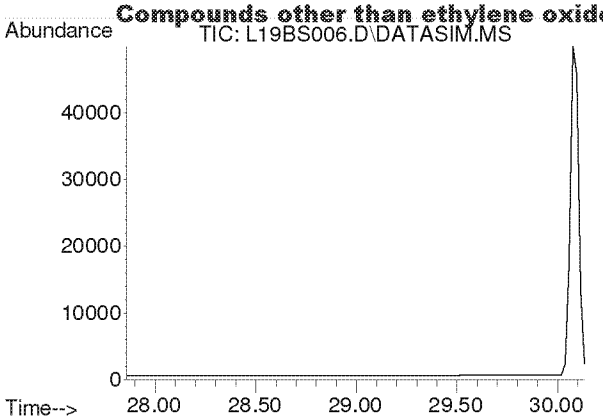
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 43

Sig	Exp Ratio
43	100
85	41.3
114	2.8



Compounds other than ethylene oxide were not quantitated.

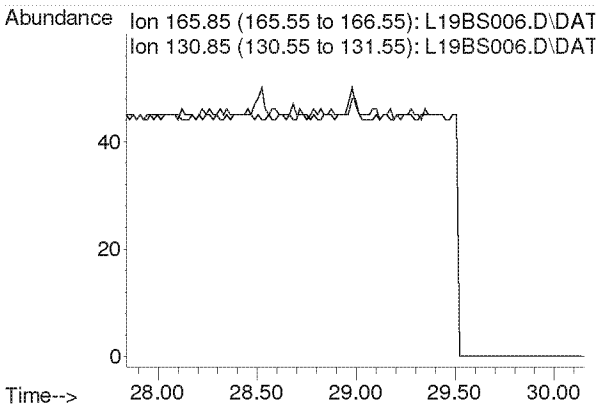


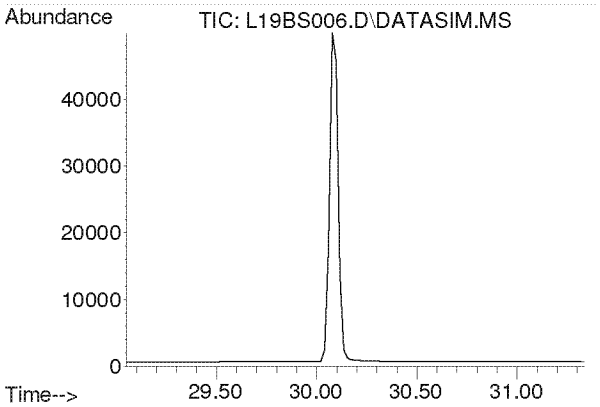
#48
Tetrachloroethylene
Concen: N.D.
Expected RT: 29.00 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 166

Sig	Exp Ratio
166	100
131	76.9



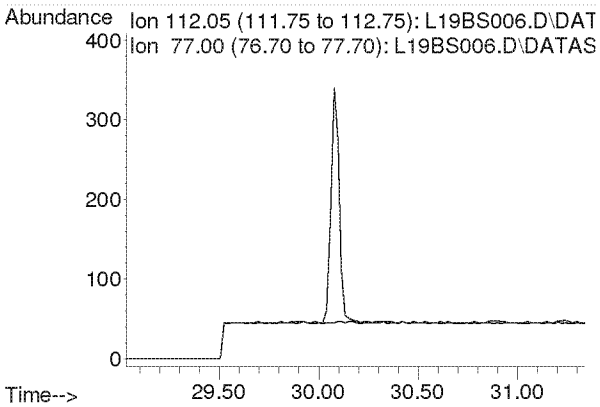


#49
Chlorobenzene
Concen: N.D.
Expected RT: 30.19 min

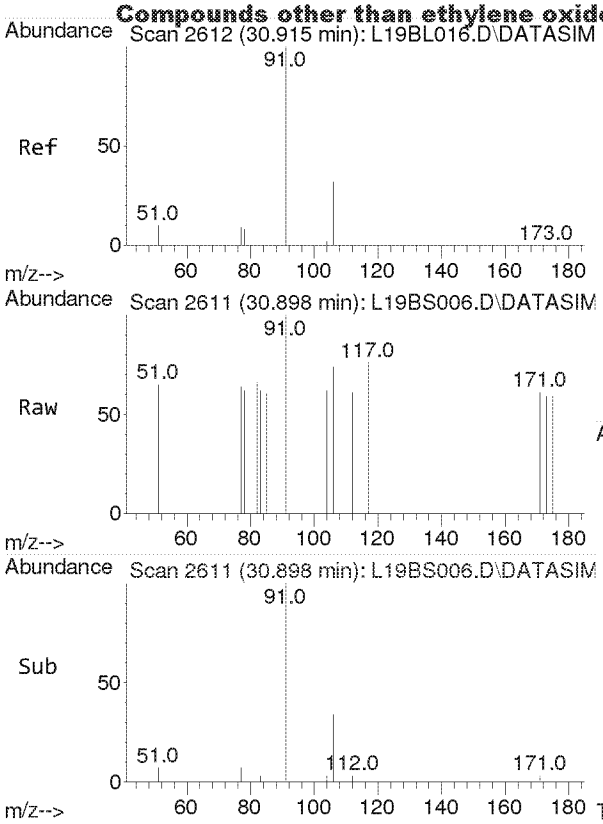
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 112

Sig	Exp Ratio
112	100
77	59.7



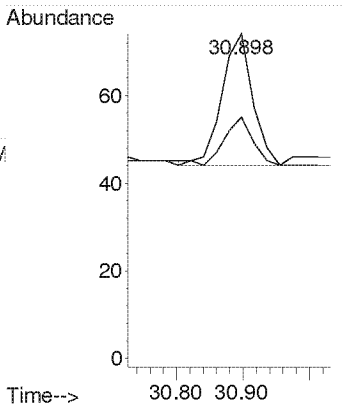
Compounds other than ethylene oxide were not quantitated.

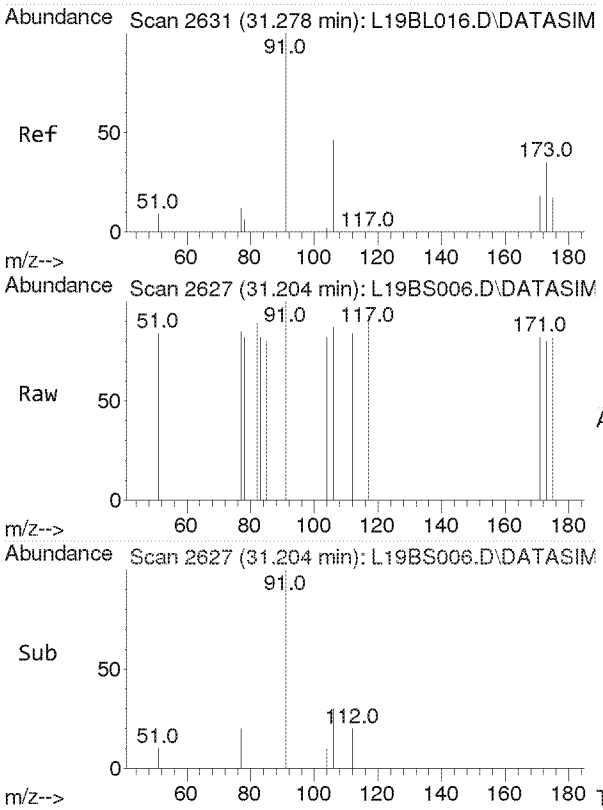


#50
Ethylbenzene
Concen: 0.006 ppbv
RT: 30.898 min Scan# 2611
Delta R.T. -0.017 min
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 91 Resp: 97

Ion	Ratio	Lower	Upper
91	100		
106	0.0	26.0	39.0#

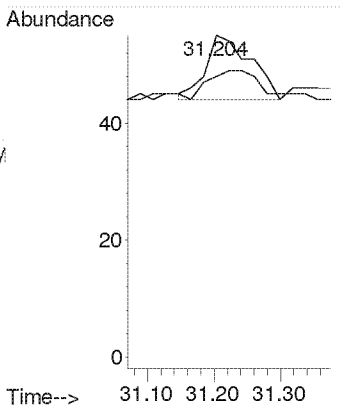




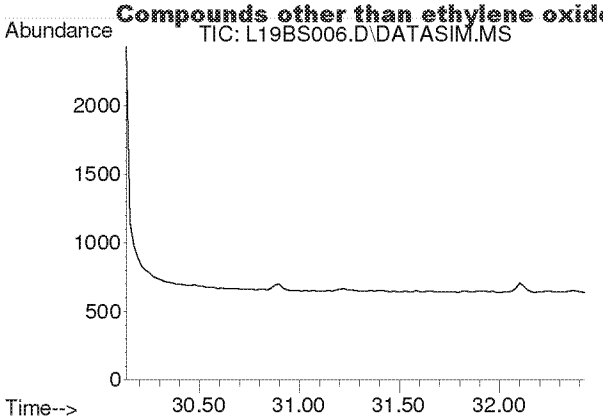
#51
m,p-Xylene
Concen: 0.004 ppbv
RT: 31.204 min Scan# 2627
Delta R.T. -0.074 min
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 91 Resp: 52

Ion	Ratio	Lower	Upper
91	100		
106	0.0	37.3	55.9#



Compounds other than ethylene oxide were not quantitated.

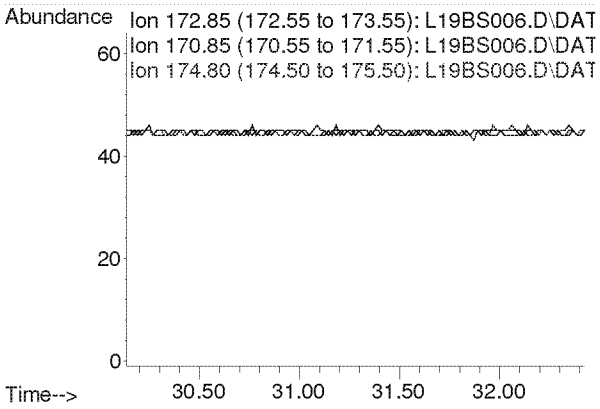


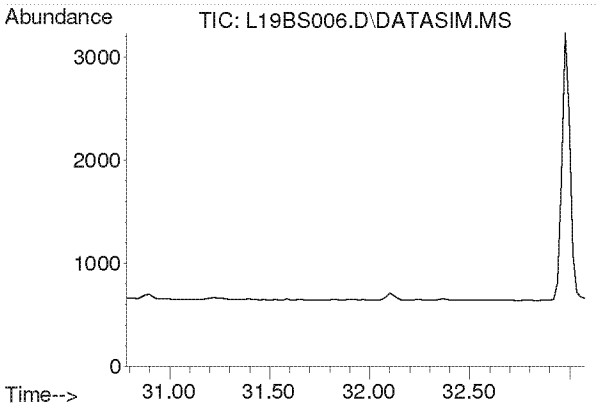
#52
Bromoform
Concen: N.D.
Expected RT: 31.28 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 173

Sig	Exp Ratio
173	100
171	51.3
175	48.9



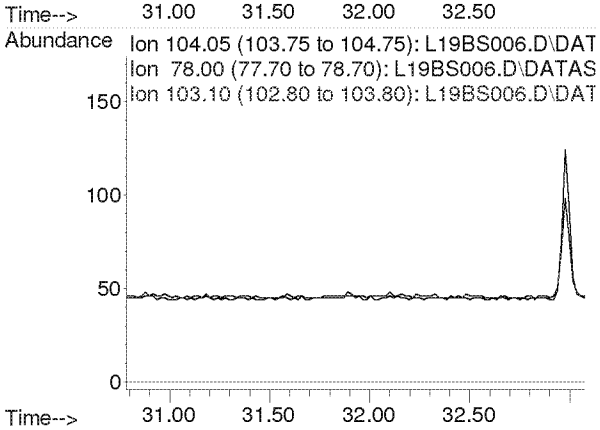


#53
Styrene
Concen: N.D.
Expected RT: 31.93 min

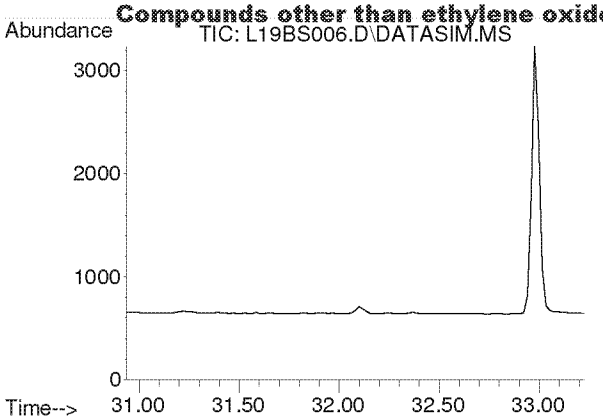
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 104

Sig	Exp Ratio
104	100
78	44.3
103	0.0



Compounds other than ethylene oxide were not quantitated.

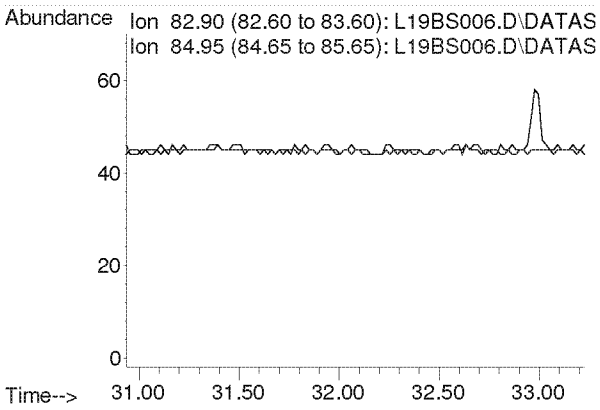


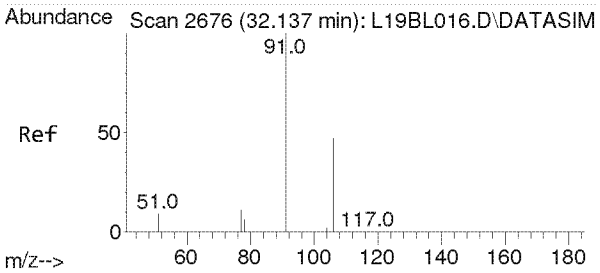
#54
1,1,2,2-Tetrachloroethane
Concen: N.D.
Expected RT: 32.08 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.5

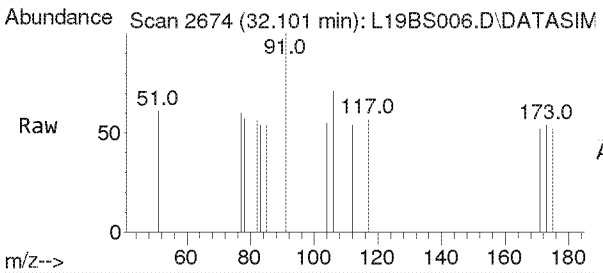


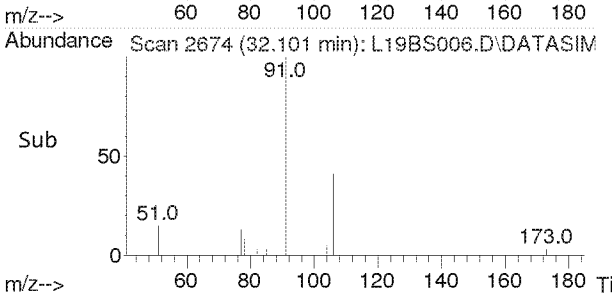


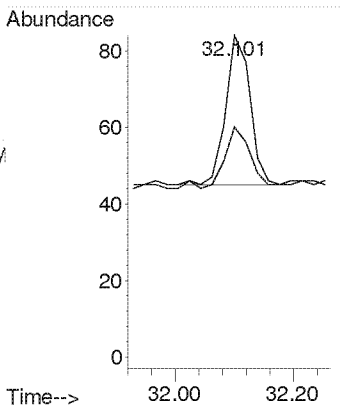
#55
o-Xylene
Concen: 0.009 ppbv
RT: 32.101 min Scan# 2674
Delta R.T. -0.036 min
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 91 Resp: 111

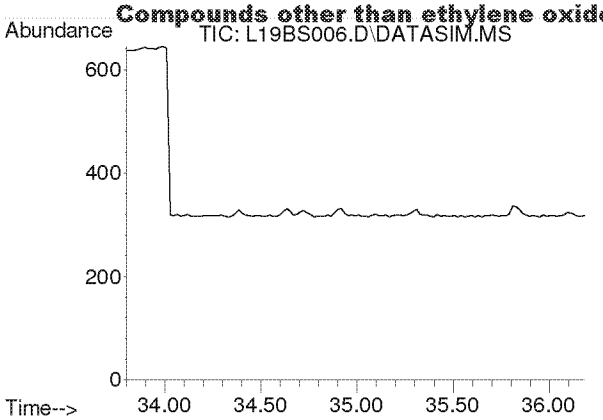
Ion	Ratio	Lower	Upper
91	100		
106	44.1	36.6	55.0







Compounds other than ethylene oxide were not quantitated.

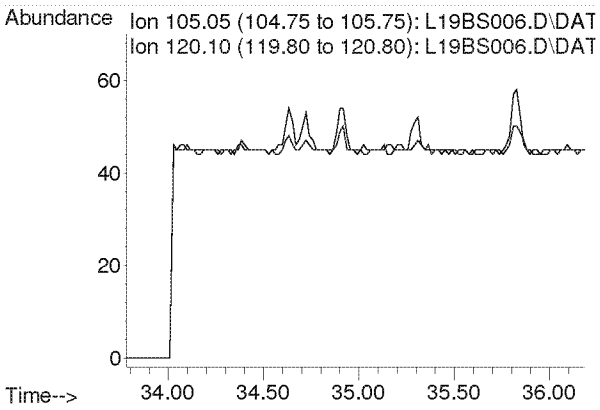


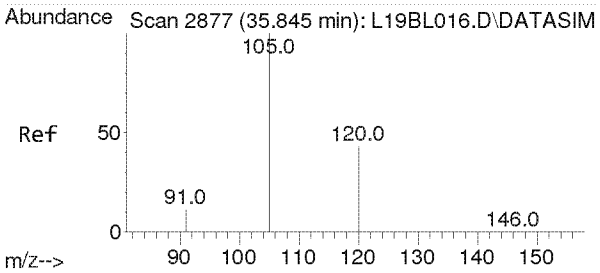
#56
1,3,5-Trimethylbenzene
Concen: N.D.
Expected RT: 34.94 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	46.0

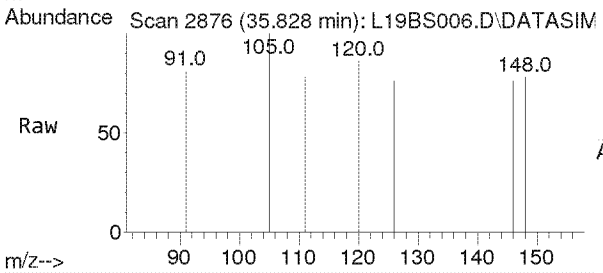


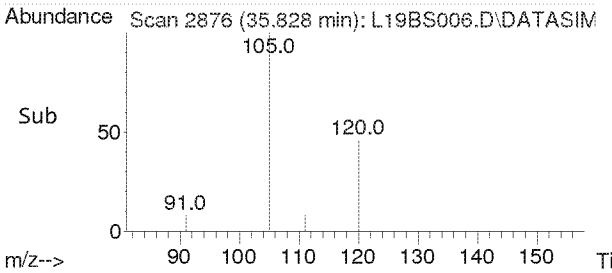


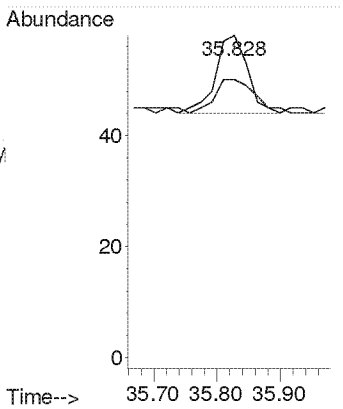
#57
1,2,4-Trimethylbenzene
Concen: 0.004 ppbv
RT: 35.828 min Scan# 2876
Delta R.T. -0.017 min
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion:105 Resp: 49

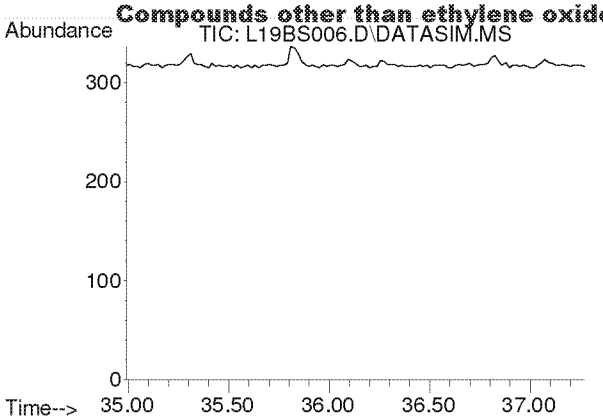
Ion	Ratio	Lower	Upper
105	100		
120	0.0	35.2	52.8#







Compounds other than ethylene oxide were not quantitated.

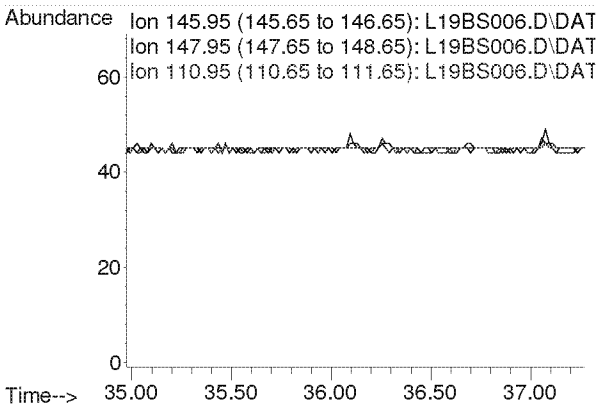


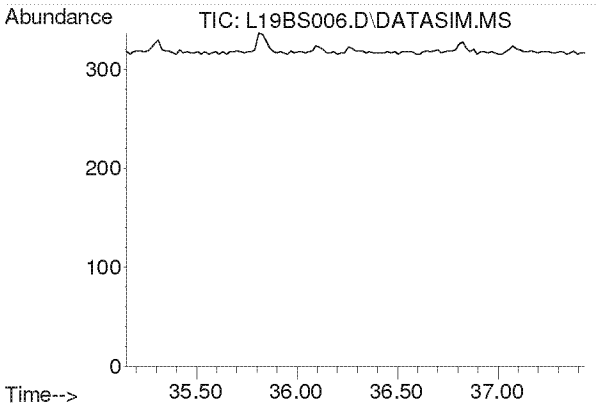
#58
m-Dichlorobenzene
Concen: N.D.
Expected RT: 36.13 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.1
111	40.1



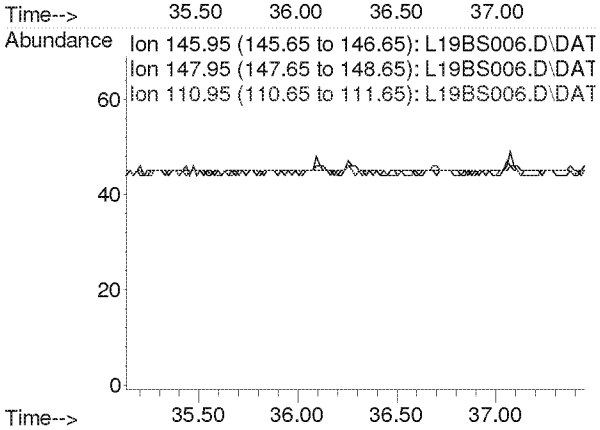


#59
p-Dichlorobenzene
Concen: N.D.
Expected RT: 36.29 min

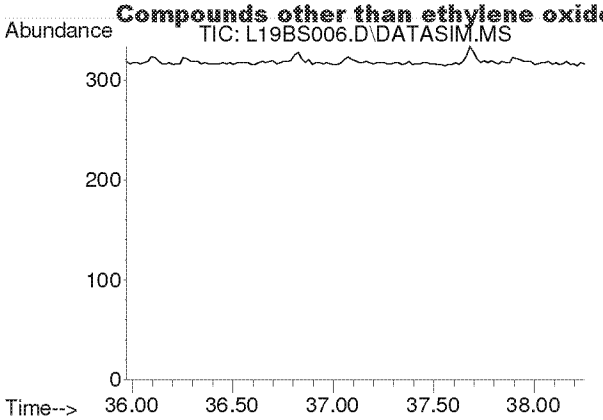
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.3
111	38.7



Compounds other than ethylene oxide were not quantitated.

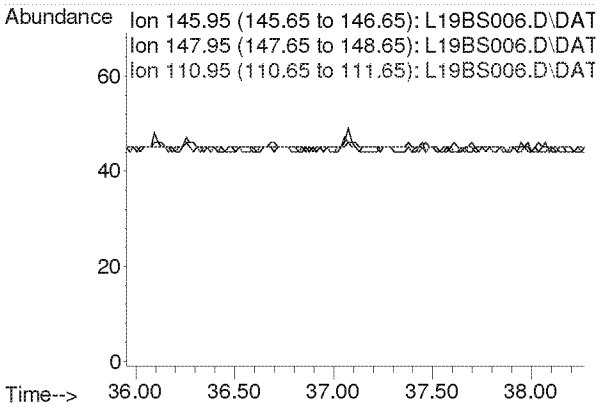


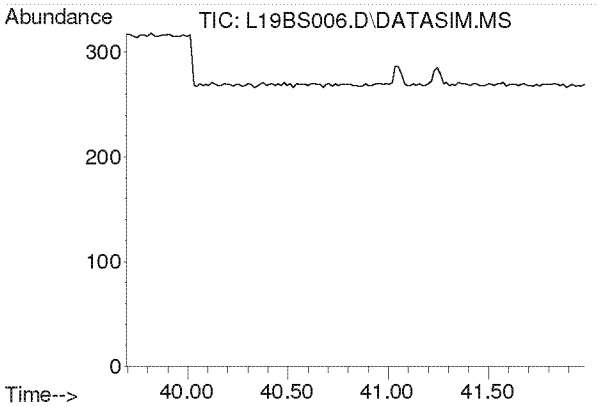
#60
o-Dichlorobenzene
Concen: N.D.
Expected RT: 37.11 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.8



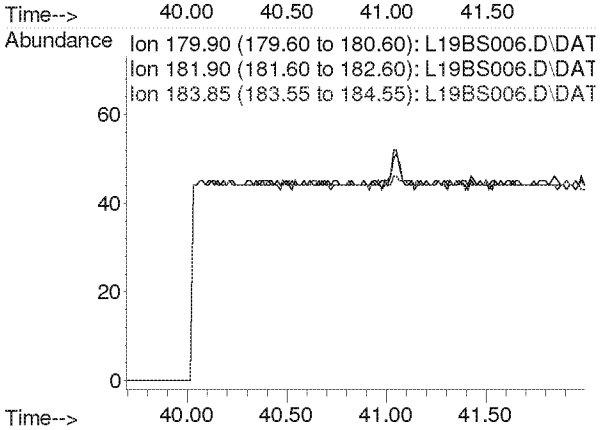


#61
1,2,4-Trichlorobenzene
Concen: N.D.
Expected RT: 40.84 min

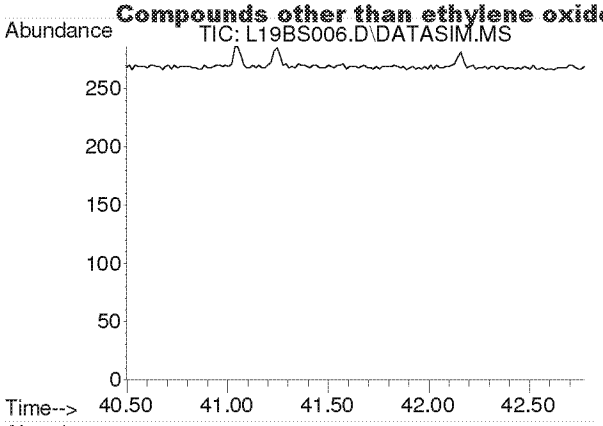
Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 180

Sig	Exp Ratio
180	100
182	94.6
184	30.2



Compounds other than ethylene oxide were not quantitated.

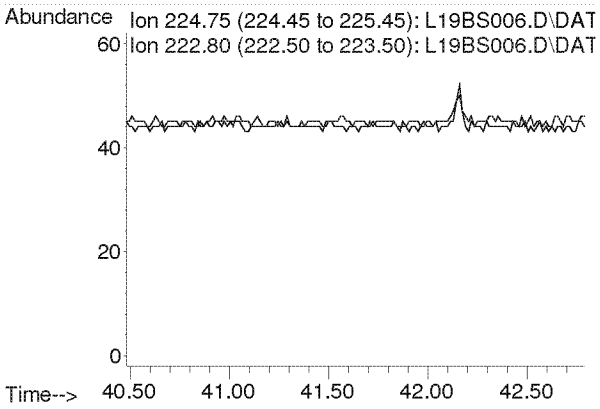


#62
Hexachloro-1,3-butadiene
Concen: N.D.
Expected RT: 41.63 min

Lab File: L19BS006.D
Acq: 19 Feb 2019 3:41 pm

Tgt Ion: 225

Sig	Exp Ratio
225	100
223	62.4



Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS020.D
Acq On : 20 Feb 2019 5:57 am (#1); 20-Feb-19, 05:51:52 (#2)
Operator : MAH
Sample : 9021401-05
Misc : WILLOW POND PARK 2/12/19
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 20 14:46:47 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) IS-Hexane-d14	19.970	66	41375	4.7700 ppbv	-0.02
29) IS-1,4-Difluorobenzene	23.130	114	104883	4.9900 ppbv	-0.02
43) IS-Chlorobenzene-d5	30.097	117	74759	4.7400 ppbv	-0.02

System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D. d	
3) Propylene	0.000	41	0	N.D. d	
4) Dichlorodifluoromethane	0.000	85	0	N.D. d	
5) Chloromethane	0.000	50	0	N.D. d	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D. d	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D. d	
9) Ethylene oxide	12.485	29	116m	0.0490 ppbv	
10) Bromomethane	0.000	94	0	N.D. d	
11) Chloroethane	0.000	64	0	N.D.	
12) Acetonitrile	0.000	41	0	N.D. d	
13) Acrolein	0.000	56	0	N.D. d	
14) Trichlorofluoromethane	0.000	101	0	N.D. d	
15) Acrylonitrile	0.000	53	0	N.D.	
16) 1,1-Dichloroethene	0.000	61	0	N.D.	
17) Methylene Chloride	0.000	49	0	N.D. d	
18) Carbon Disulfide	0.000	76	0	N.D. d	
19) Trichlorotrifluoroethane	0.000	101	0	N.D. d	
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) 1,1-Dichloroethane	0.000	63	0	N.D.	
22) Methyl tert-Butyl Ether	0.000	73	0	N.D. d	
23) Chloroprene	0.000	53	0	N.D.	
24) cis-1,2-Dichloroethylene	0.000	61	0	N.D.	
25) Bromochloromethane	0.000	128	0	N.D.	
26) Chloroform	0.000	83	0	N.D. d	
27) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
28) 1,2-Dichloroethane	0.000	62	0	N.D. d	
30) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
31) Benzene	0.000	78	0	N.D. d	
32) Carbon Tetrachloride	0.000	117	0	N.D. d	
33) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) 1,2-Dichloropropane	0.000	63	0	N.D.	
35) Ethyl Acrylate	0.000	55	0	N.D.	
36) Bromodichloromethane	0.000	83	0	N.D.	
37) Trichloroethylene	0.000	130	0	N.D.	
38) Methyl Methacrylate	0.000	41	0	N.D.	
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	0.000	43	0	N.D. d	
41) trans-1,3-Dichloropropene	0.000	75	0	N.D.	
42) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
44) Toluene	0.000	91	0	N.D. d	
45) Dibromochloromethane	0.000	129	0	N.D. d	
46) 1,2-Dibromoethane	0.000	107	0	N.D.	
47) n-Octane	0.000	43	0	N.D. d	
48) Tetrachloroethylene	0.000	166	0	N.D. d	
49) Chlorobenzene	0.000	112	0	N.D.	
50) Ethylbenzene	0.000	91	0	N.D. d	

Compounds other than ethylene oxide were not quantitated

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS020.D
Acq On : 20 Feb 2019 5:57 am (#1); 20-Feb-19, 05:51:52 (#2)
Operator : MAH
Sample : 9021401-05
Misc : WILLOW POND PARK 2/12/19
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 20 14:46:47 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

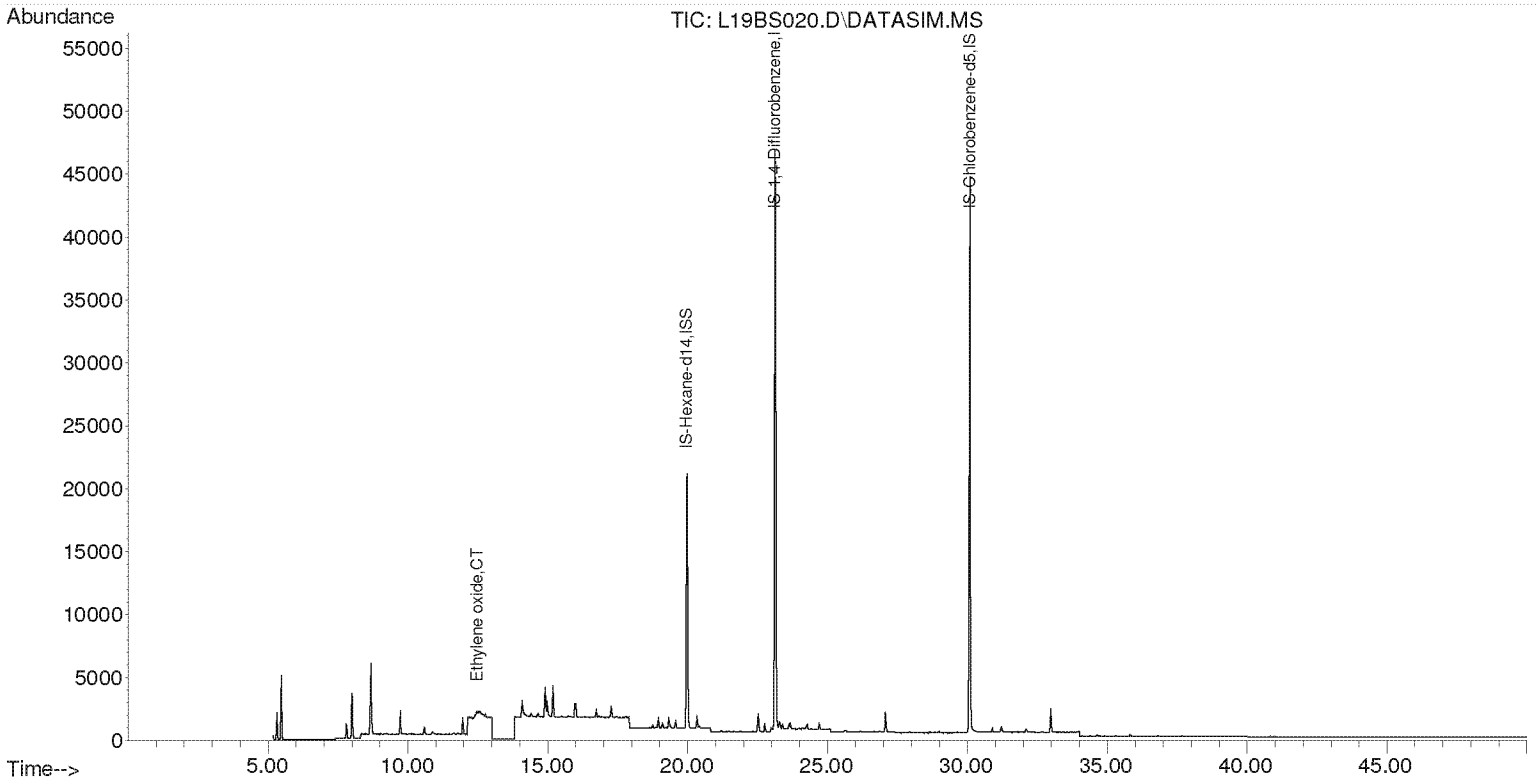
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	0.000	91	0	N.D. d	
52) Bromoform	0.000	173	0	N.D.	
53) Styrene	0.000	104	0	N.D. d	
54) 1,1,2,2-Tetrachloroethane	0.000	83	0	N.D.	
55) o-Xylene	0.000	91	0	N.D. d	
56) 1,3,5-Trimethylbenzene	0.000	105	0	N.D. d	
57) 1,2,4-Trimethylbenzene	0.000	105	0	N.D. d	
58) m-Dichlorobenzene	0.000	146	0	N.D.	
59) p-Dichlorobenzene	0.000	146	0	N.D.	
60) o-Dichlorobenzene	0.000	146	0	N.D.	
61) 1,2,4-Trichlorobenzene	0.000	180	0	N.D.	
62) Hexachloro-1,3-butadiene	0.000	225	0	N.D.	

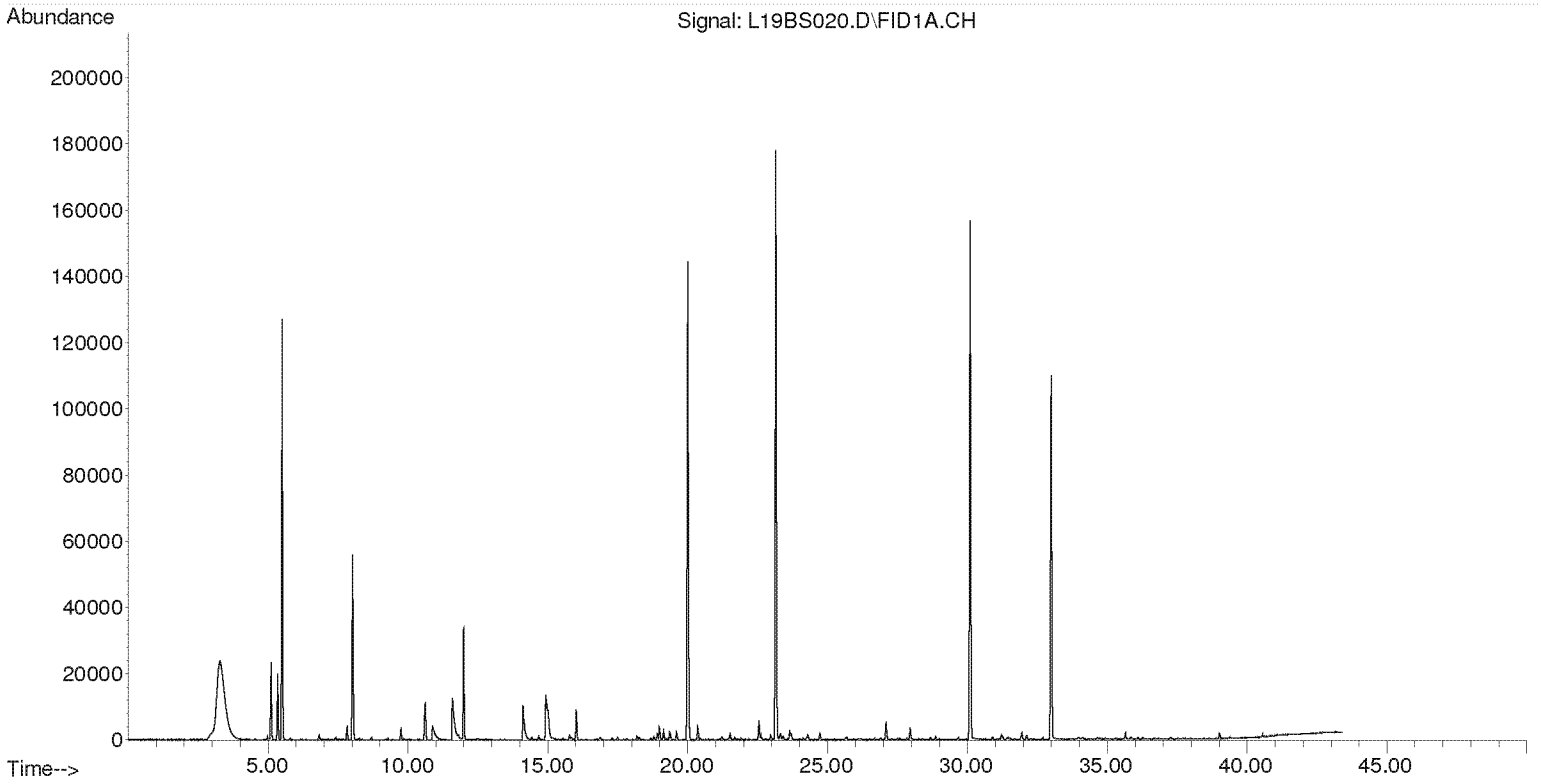
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Compounds other than ethylene oxide were not quantitated.

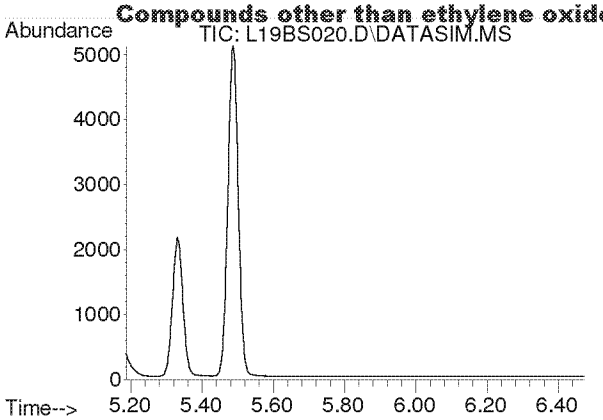
Data Path : Y:\MASS SPEC 1 DATA\L19BS\
Data File : L19BS020.D
Acq On : 20 Feb 2019 5:57 am (#1); 20 Feb 2019 5:51 am (#2)
Operator : MAH
Sample : 9021401-05
Misc : WILLOW POND PARK 2/12/19
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Feb 20 13:54:31 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration





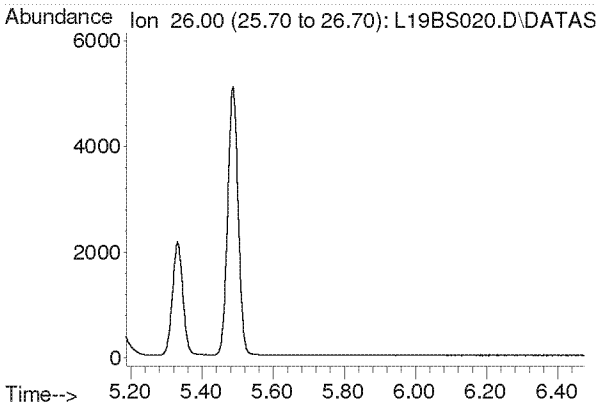
Compounds other than ethylene oxide were not quantitated.

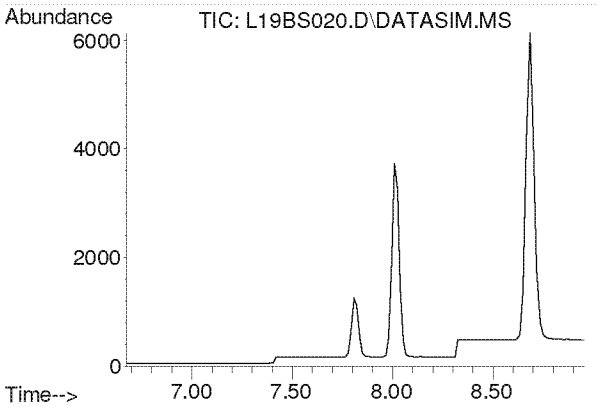


#2
Acetylene
Concen: N.D.
Expected RT: 5.40 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 26



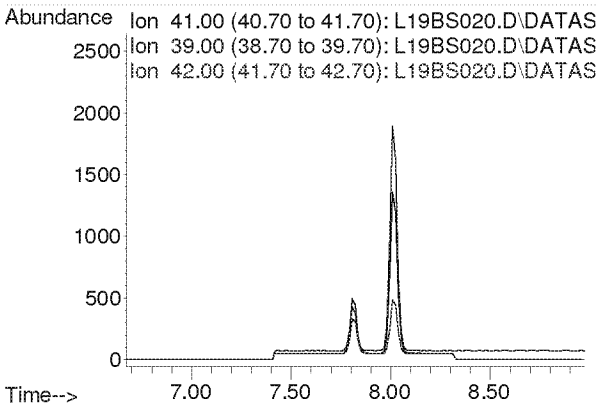


#3
Propylene
Concen: N.D.
Expected RT: 7.82 min

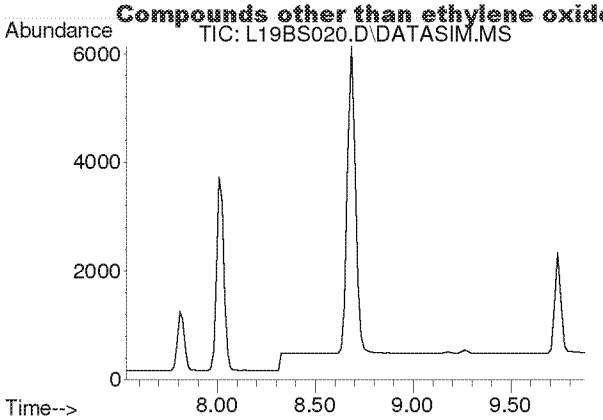
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
39	80.2
42	65.8



Compounds other than ethylene oxide were not quantitated.

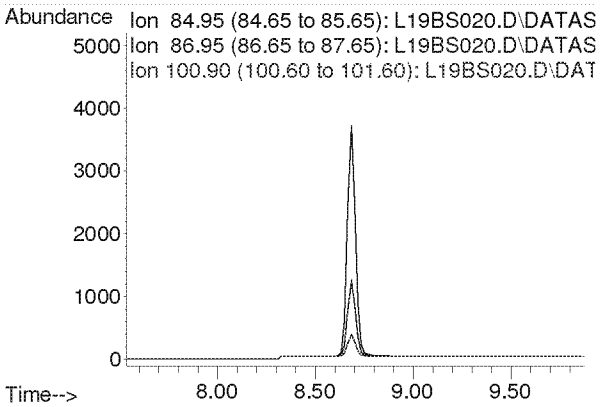


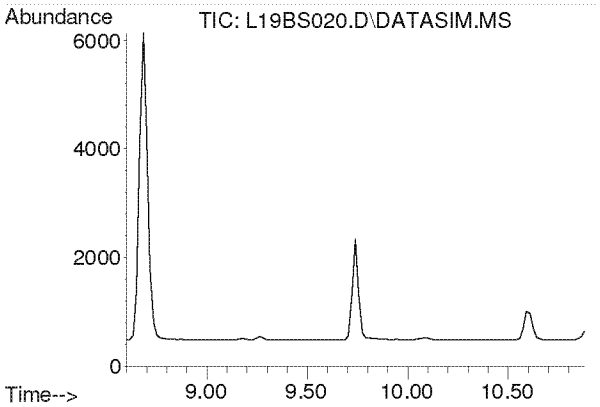
#4
Dichlorodifluoromethane
Concen: N.D.
Expected RT: 8.69 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
87	32.5
101	9.1



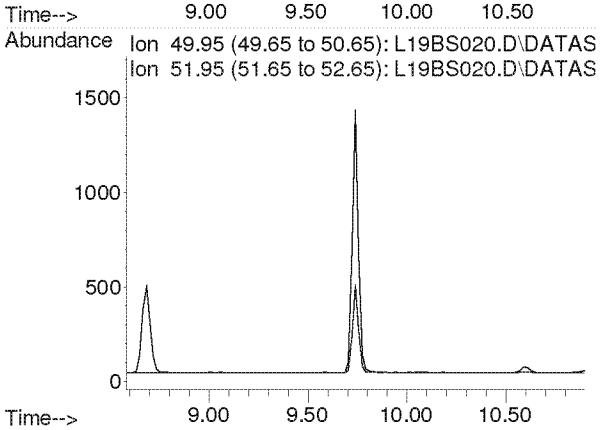


#5
Chloromethane
Concen: N.D.
Expected RT: 9.74 min

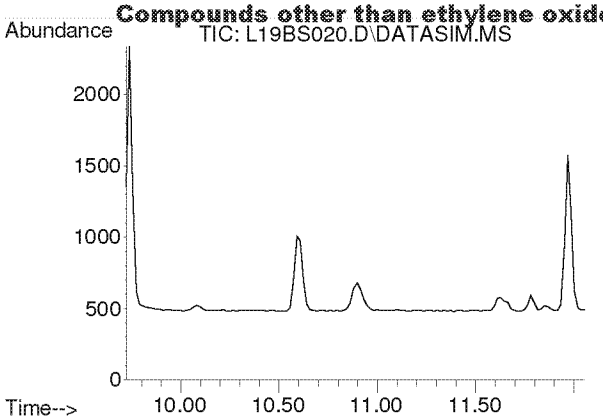
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 50

Sig	Exp Ratio
50	100
52	32.6



Compounds other than ethylene oxide were not quantitated.

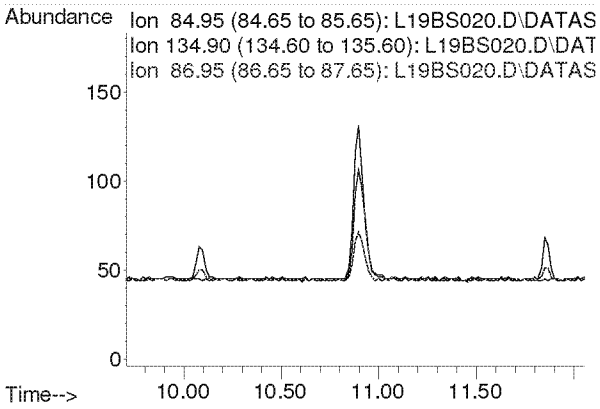


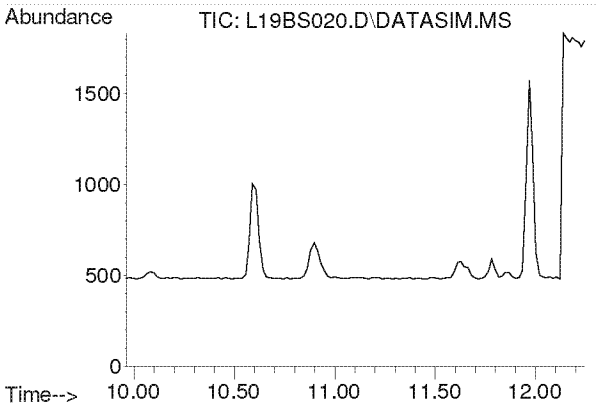
#6
Dichlorotetrafluoroethane
Concen: N.D.
Expected RT: 10.86 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
135	79.0
87	32.4



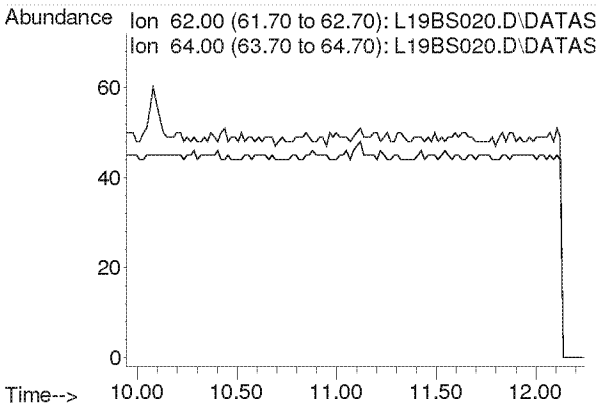


#7
Vinyl Chloride
Concen: N.D.
Expected RT: 11.10 min

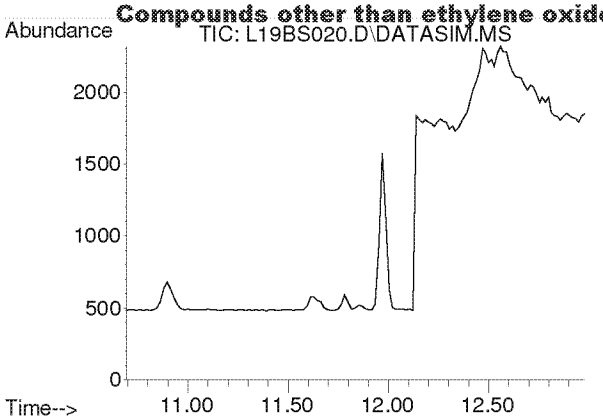
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	31.7



Compounds other than ethylene oxide were not quantitated.

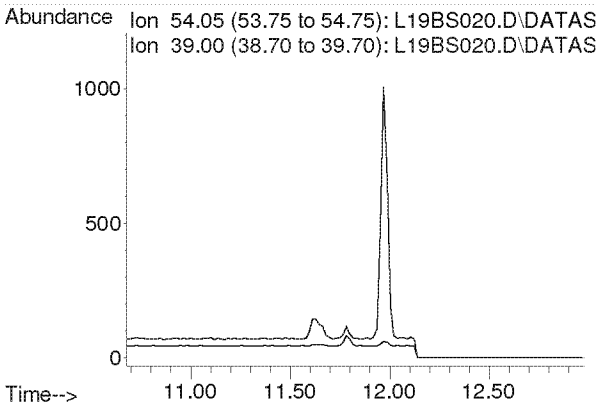


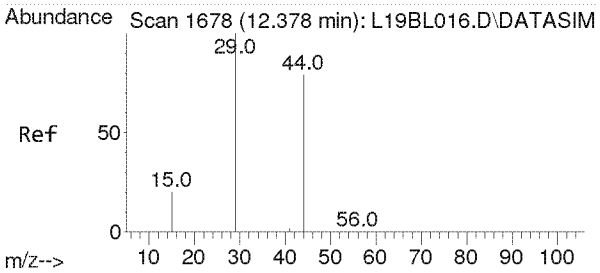
#8
1,3-Butadiene
Concen: N.D.
Expected RT: 11.78 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 54

Sig	Exp Ratio
54	100
39	102.0

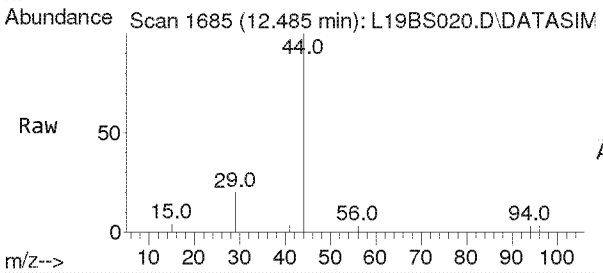


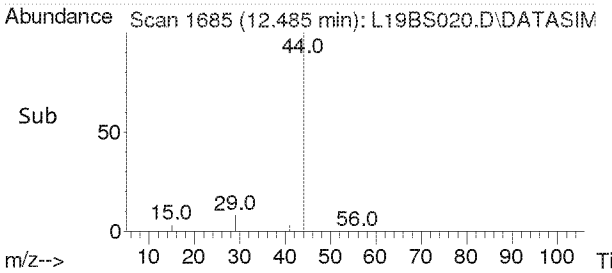


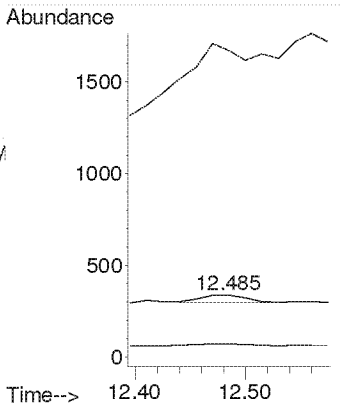
#9
Ethylene oxide
Concen: 0.049 ppbv m
RT: 12.485 min Scan# 1685
Delta R.T. 0.107 min
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 29 Resp: 116

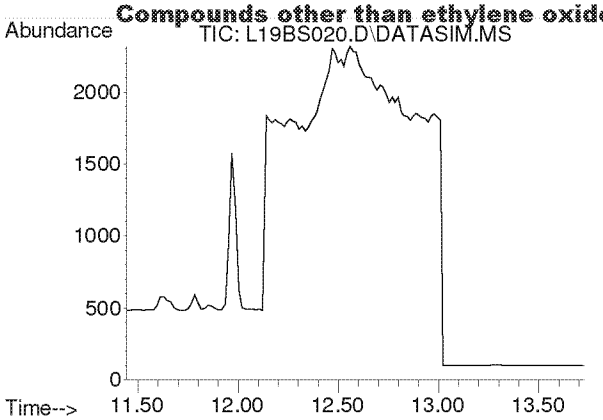
Ion	Ratio	Lower	Upper
29	100		
15	51.7	16.0	24.0#
44	0.0	65.4	98.2#







Compounds other than ethylene oxide were not quantitated.

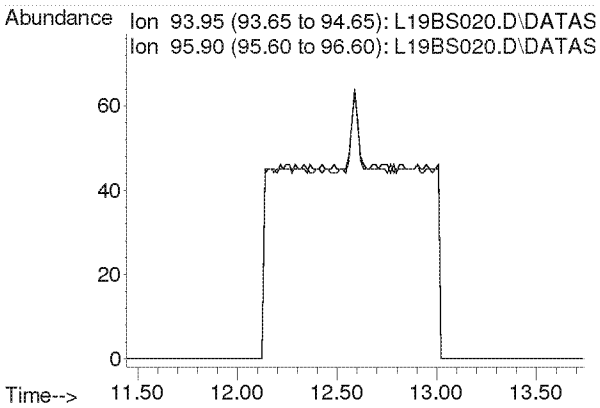


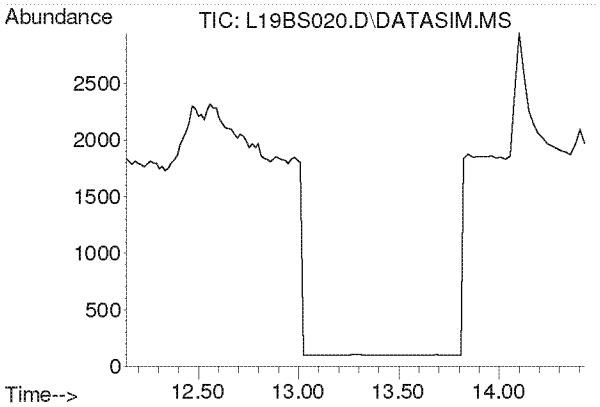
#10
Bromomethane
Concen: N.D.
Expected RT: 12.59 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 94

Sig	Exp Ratio
94	100
96	94.4



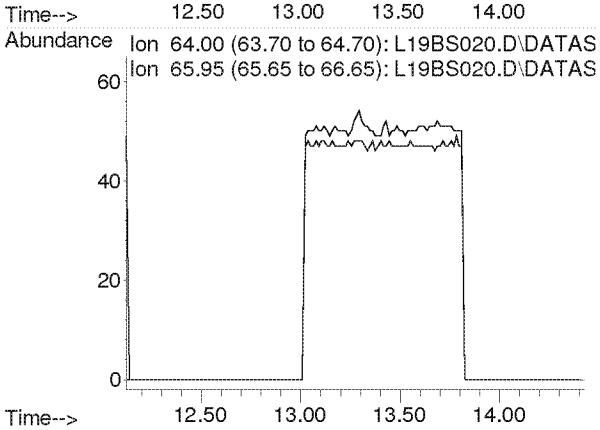


#11
Chloroethane
Concen: N.D.
Expected RT: 13.28 min

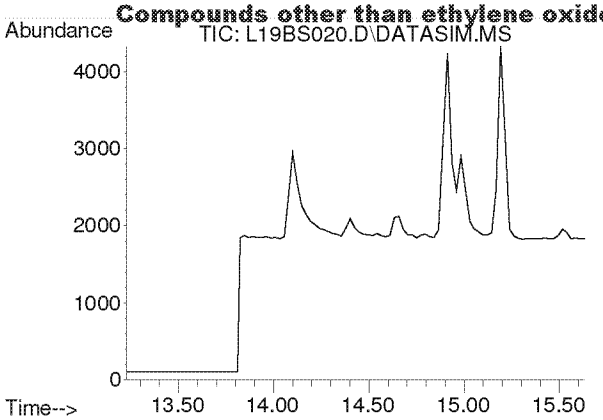
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



Compounds other than ethylene oxide were not quantitated.

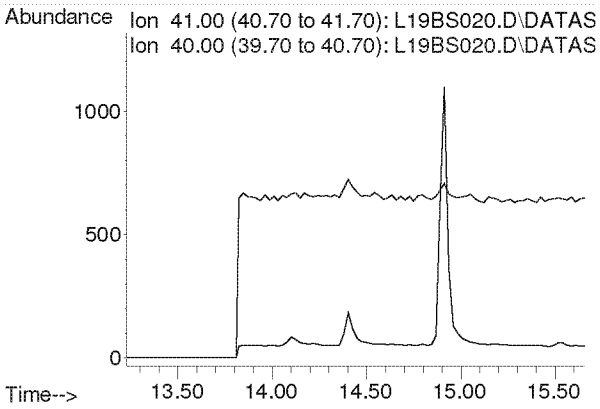


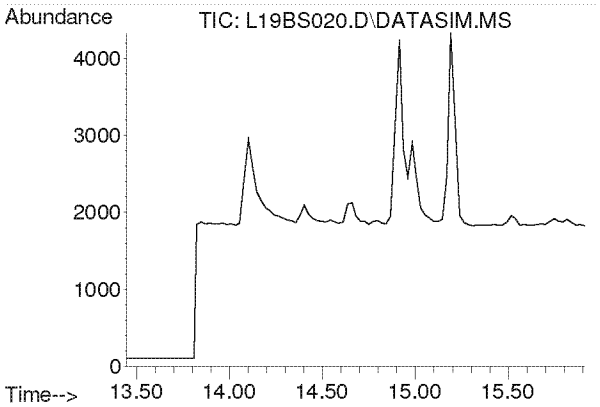
#12
Acetonitrile
Concen: N.D.
Expected RT: 14.36 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
40	52.8



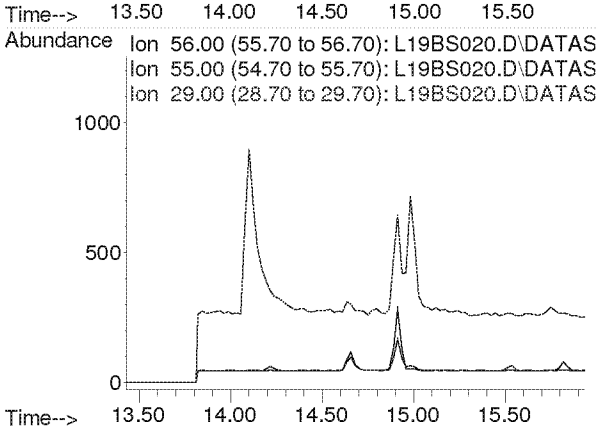


#13
Acrolein
Concen: N.D.
Expected RT: 14.63 min

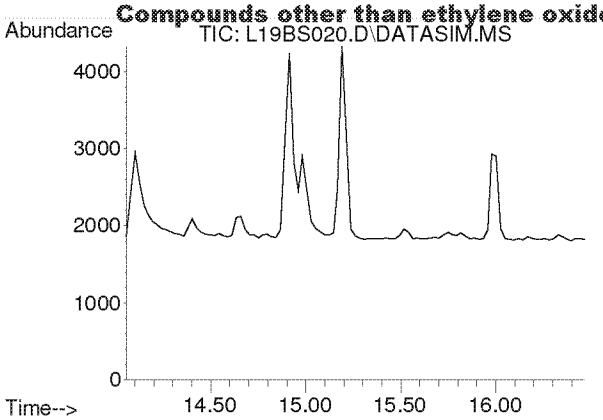
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 56

Sig	Exp Ratio
56	100
55	76.0
29	54.7



Compounds other than ethylene oxide were not quantitated.

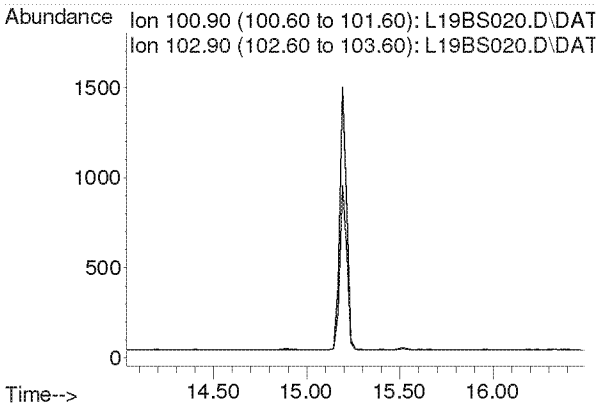


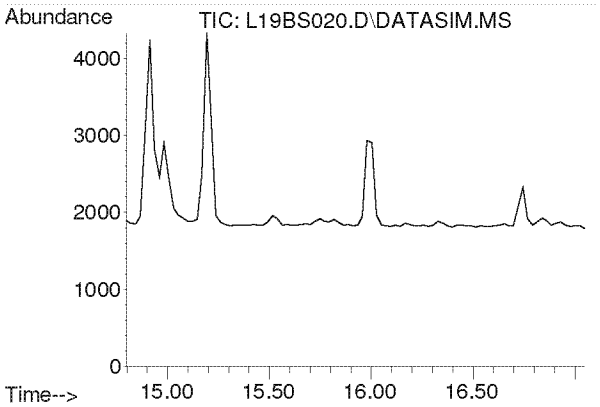
#14
Trichlorofluoromethane
Concen: N.D.
Expected RT: 15.19 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
103	64.6



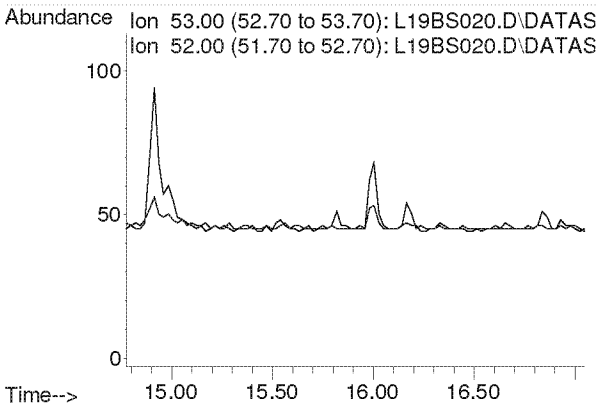


#15
Acrylonitrile
Concen: N.D.
Expected RT: 15.93 min

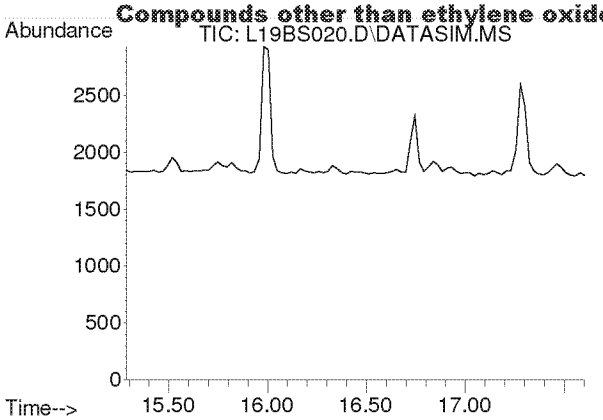
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
52	86.9



Compounds other than ethylene oxide were not quantitated.

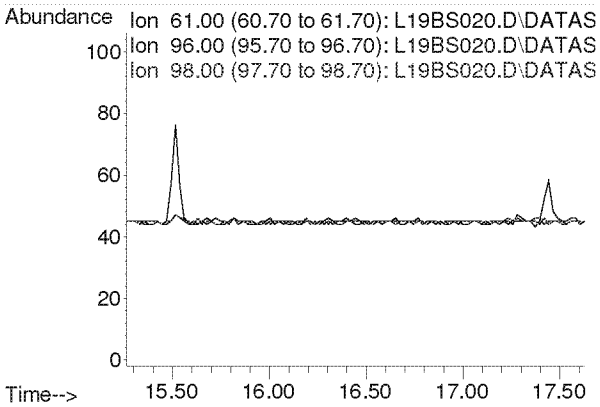


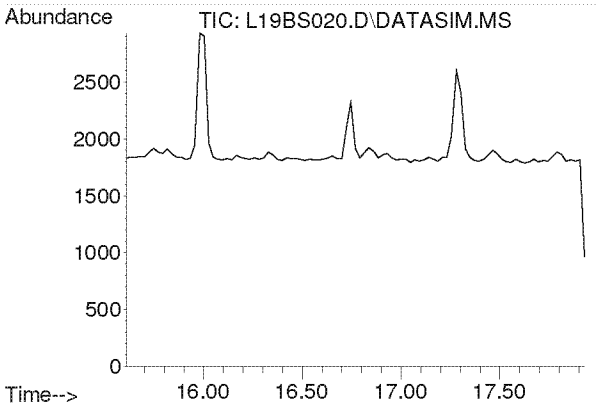
#16
1,1-Dichloroethene
Concen: N.D.
Expected RT: 16.42 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	59.1
98	38.2



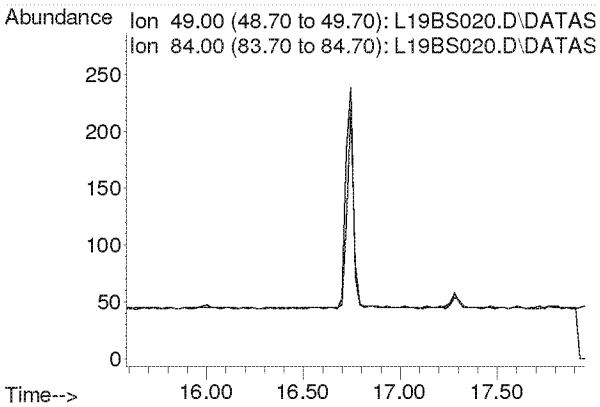


#17
Methylene Chloride
Concen: N.D.
Expected RT: 16.74 min

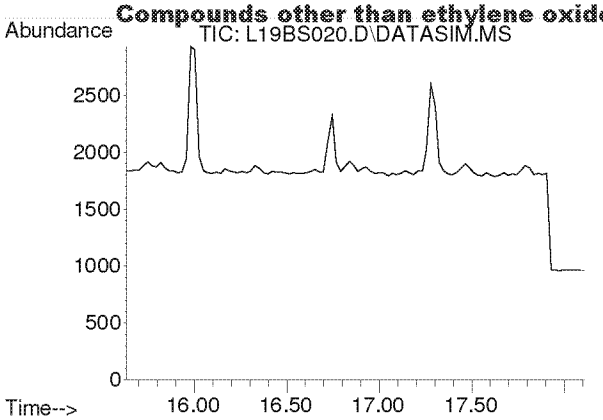
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 49

Sig	Exp Ratio
49	100
84	77.2



Compounds other than ethylene oxide were not quantitated.

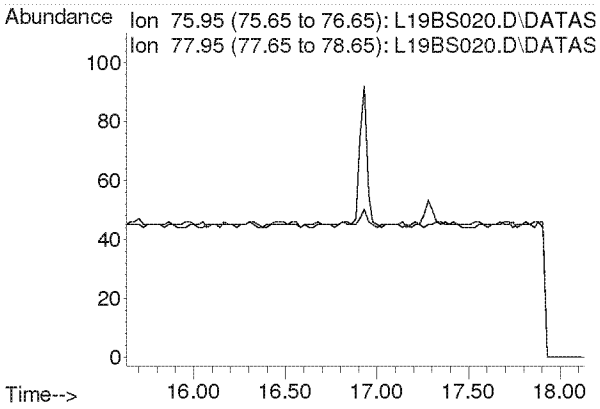


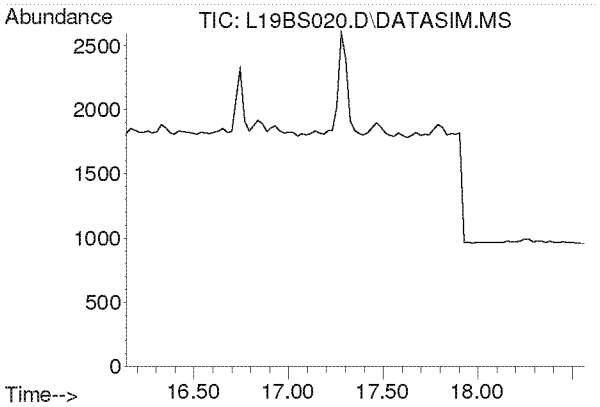
#18
Carbon Disulfide
Concen: N.D.
Expected RT: 16.93 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 76

Sig	Exp Ratio
76	100
78	9.2



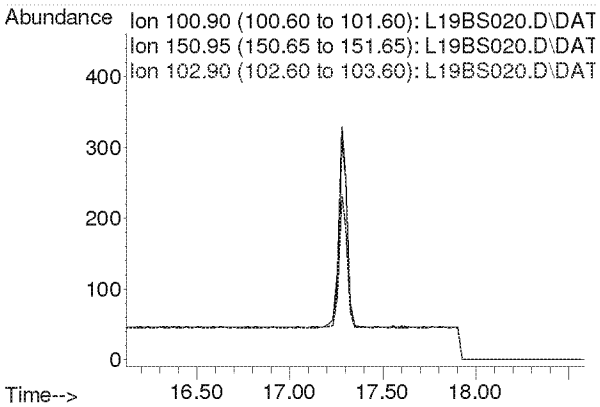


#19
Trichlorotrifluoroethane
Concen: N.D.
Expected RT: 17.28 min

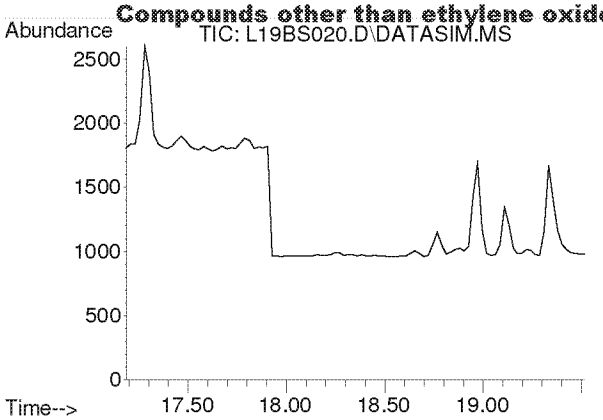
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
151	94.8
103	63.9



Compounds other than ethylene oxide were not quantitated.

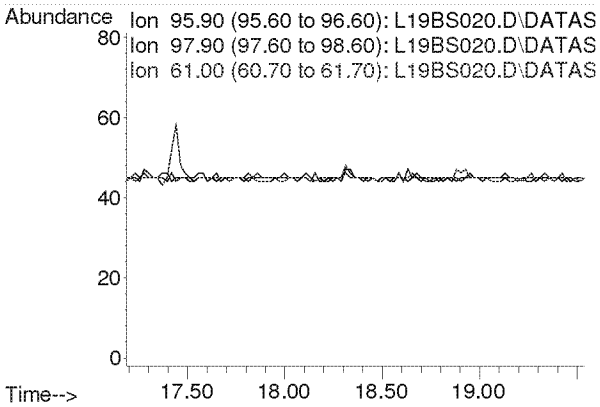


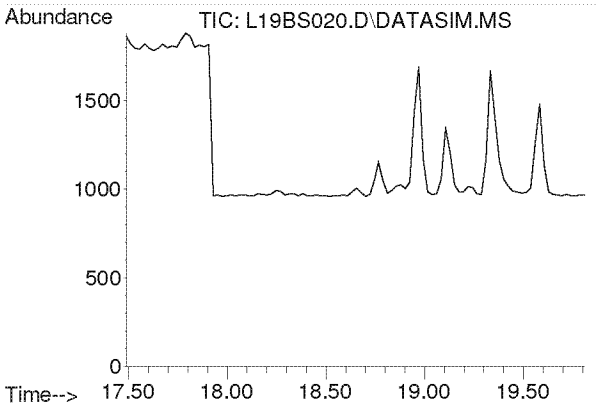
#20
trans-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 18.34 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 96

Sig	Exp Ratio
96	100
98	64.4
61	153.6



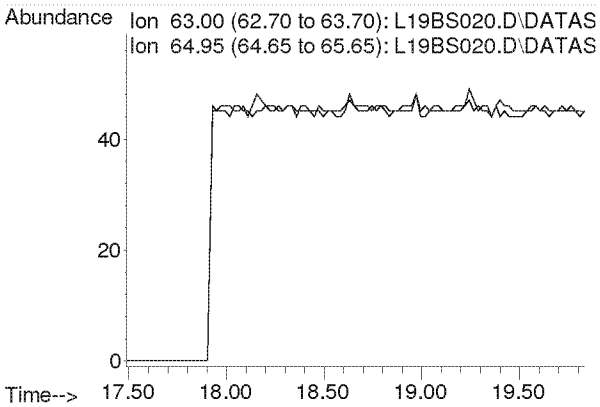


#21
1,1-Dichloroethane
Concen: N.D.
Expected RT: 18.63 min

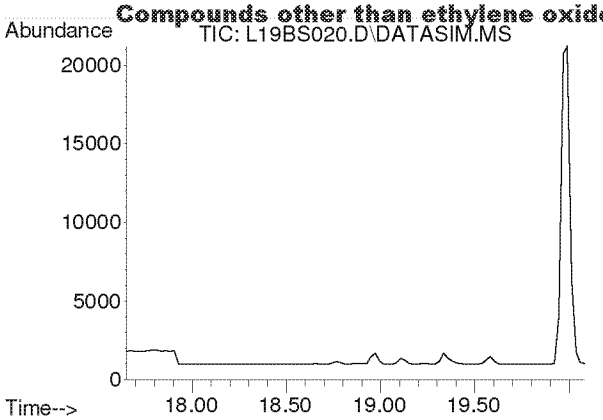
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
65	31.7



Compounds other than ethylene oxide were not quantitated.

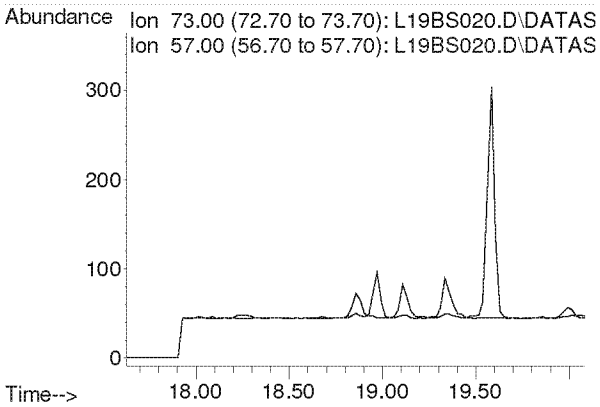


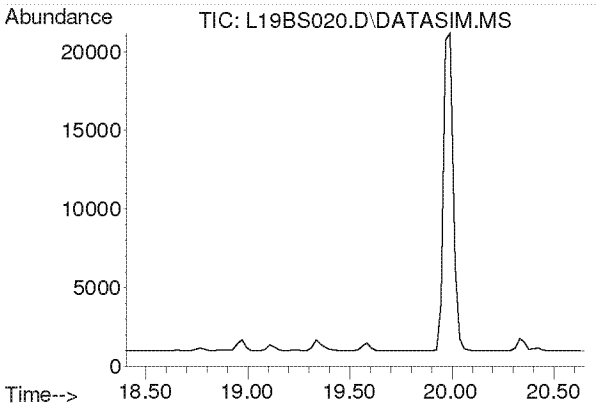
#22
Methyl tert-Butyl Ether
Concen: N.D.
Expected RT: 18.79 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
57	22.5



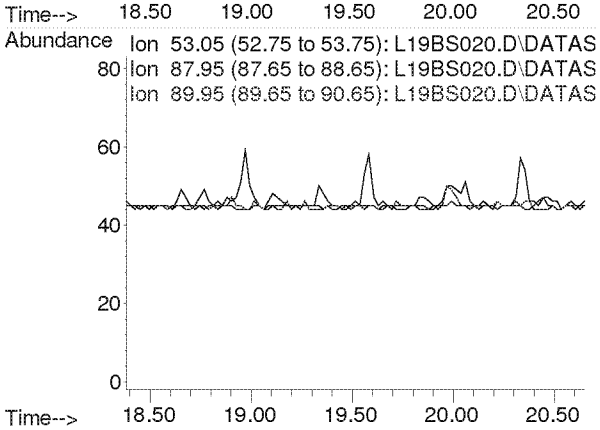


#23
Chloroprene
Concen: N.D.
Expected RT: 19.54 min

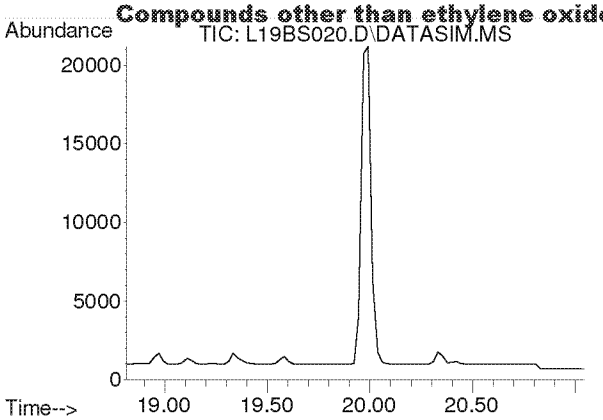
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	53.3
90	17.4



Compounds other than ethylene oxide were not quantitated.

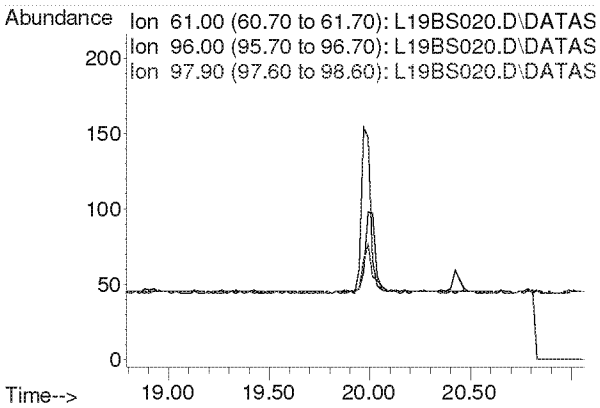


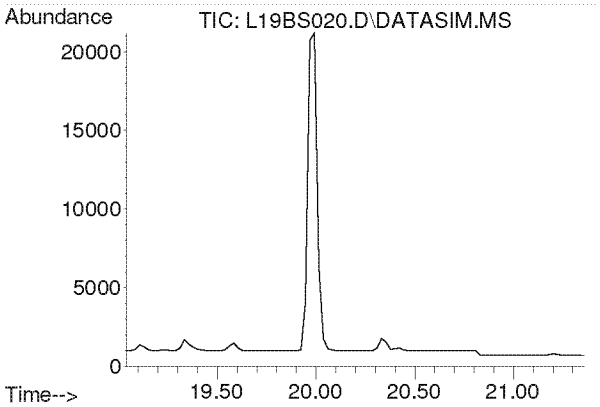
#24
cis-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 19.95 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	73.8
98	47.0



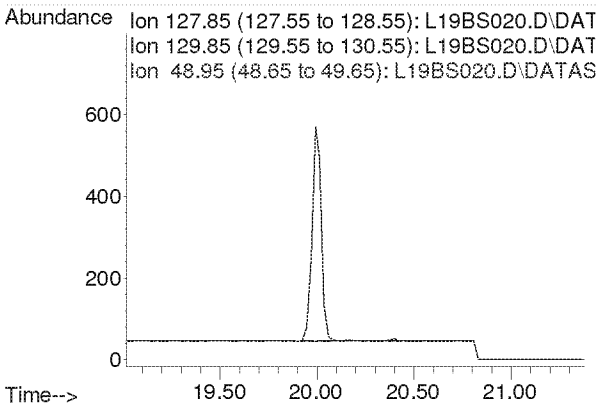


#25
Bromochloromethane
Concen: N.D.
Expected RT: 20.17 min

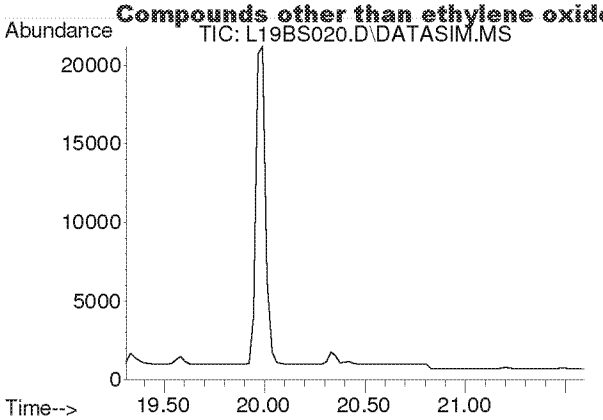
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 128

Sig	Exp Ratio
128	100
130	129.1
49	160.4



Compounds other than ethylene oxide were not quantitated.

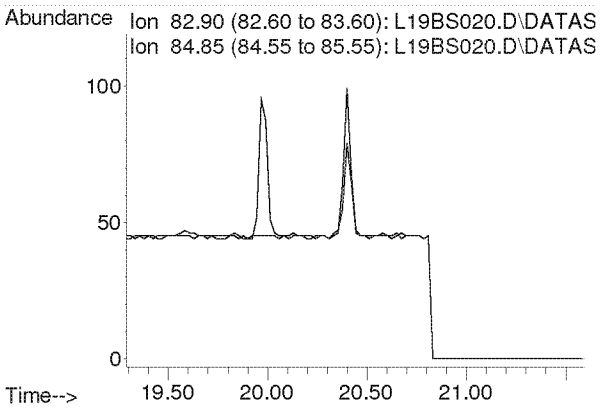


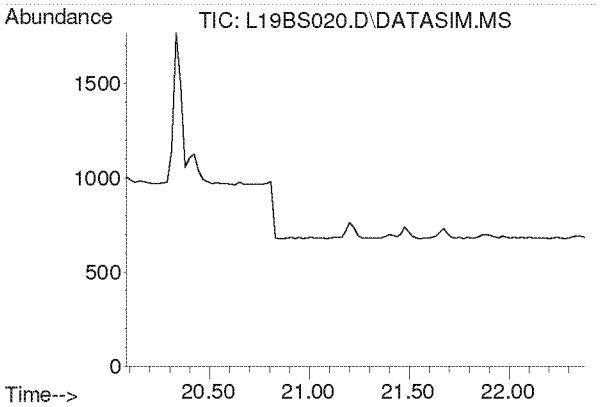
#26
Chloroform
Concen: N.D.
Expected RT: 20.40 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.4



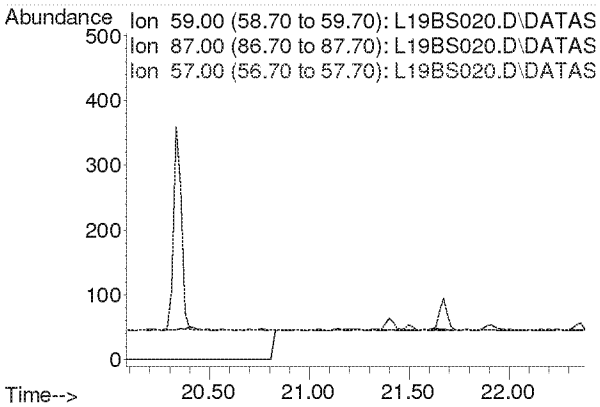


#27
Ethyl tert-Butyl Ether
Concen: N.D.
Expected RT: 21.18 min

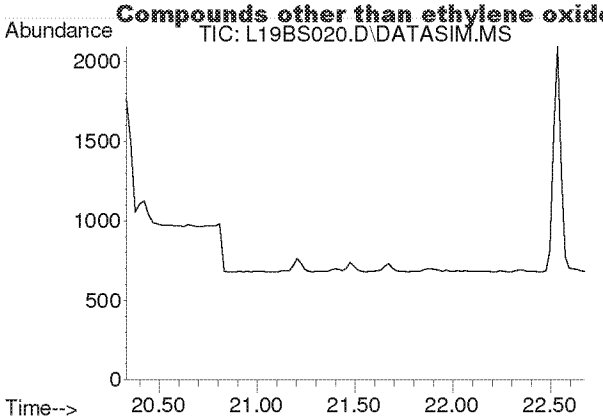
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 59

Sig	Exp Ratio
59	100
87	39.4
57	33.2



Compounds other than ethylene oxide were not quantitated.

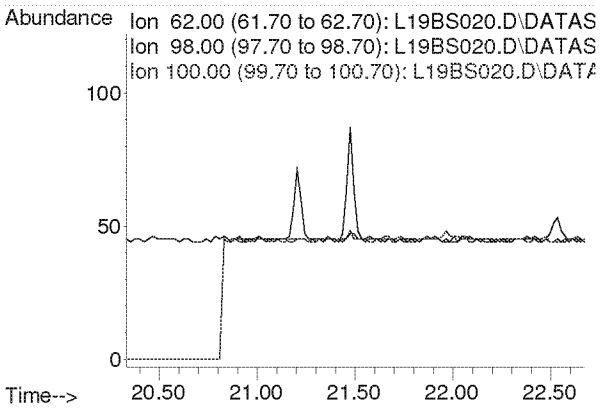


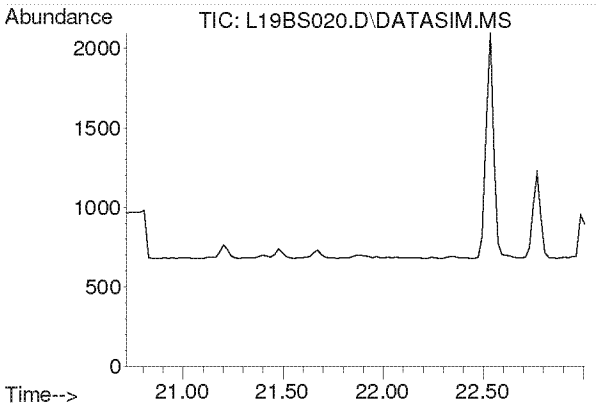
#28
1,2-Dichloroethane
Concen: N.D.
Expected RT: 21.48 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
98	6.3
100	4.0



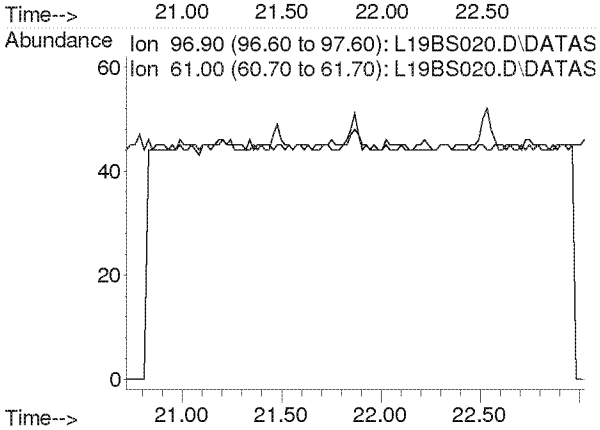


#30
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 21.87 min

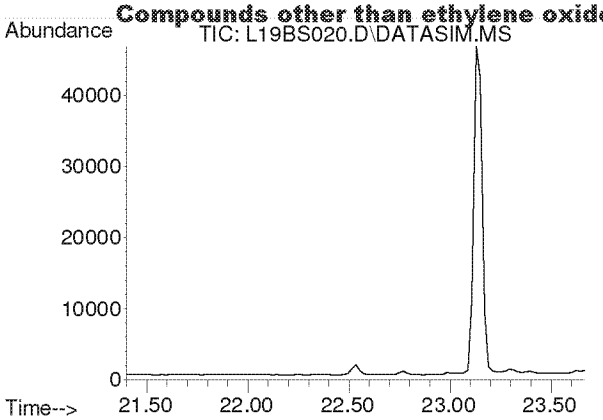
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
61	62.1



Compounds other than ethylene oxide were not quantitated.

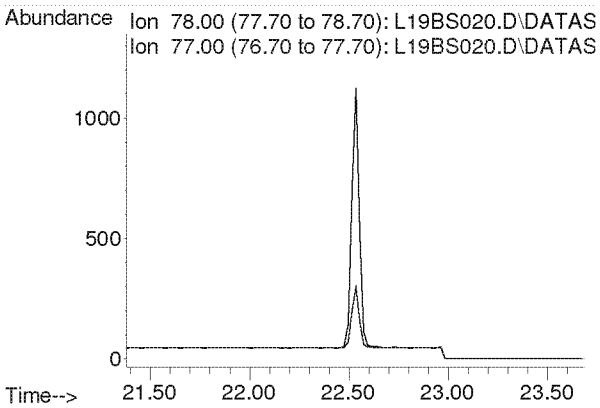


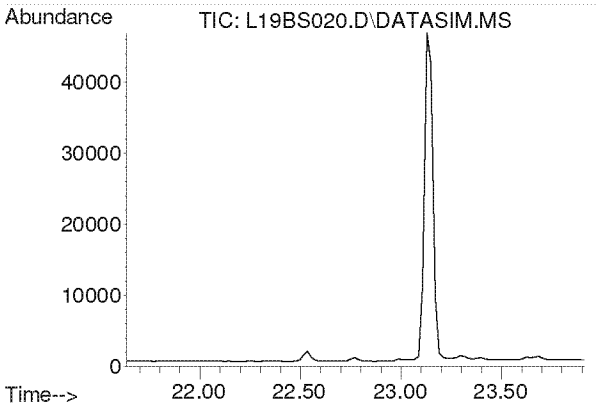
#31
Benzene
Concen: N.D.
Expected RT: 22.53 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 78

Sig	Exp Ratio
78	100
77	22.8



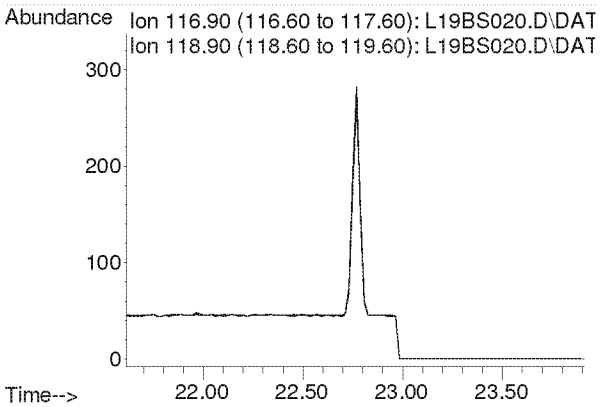


#32
Carbon Tetrachloride
Concen: N.D.
Expected RT: 22.77 min

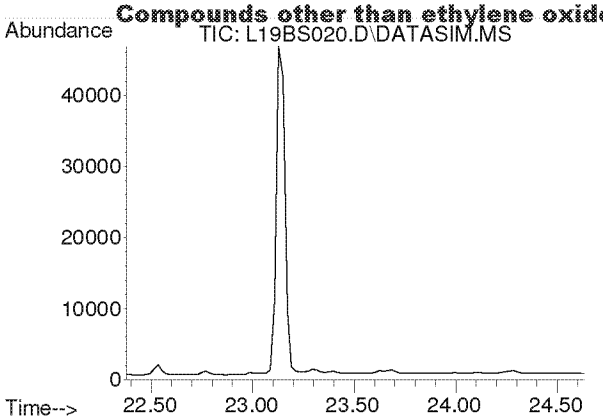
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 117

Sig	Exp Ratio
117	100
119	96.3



Compounds other than ethylene oxide were not quantitated.

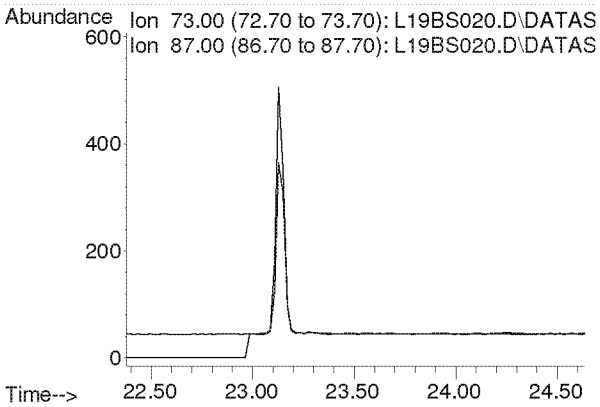


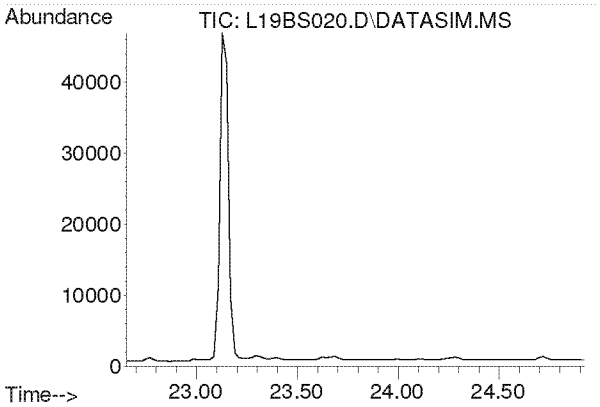
#33
tert-Amyl Methyl Ether
Concen: N.D.
Expected RT: 23.52 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
87	25.1



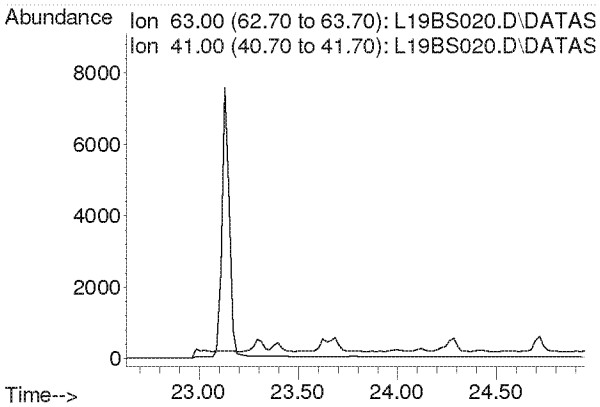


#34
1,2-Dichloropropane
Concen: N.D.
Expected RT: 23.79 min

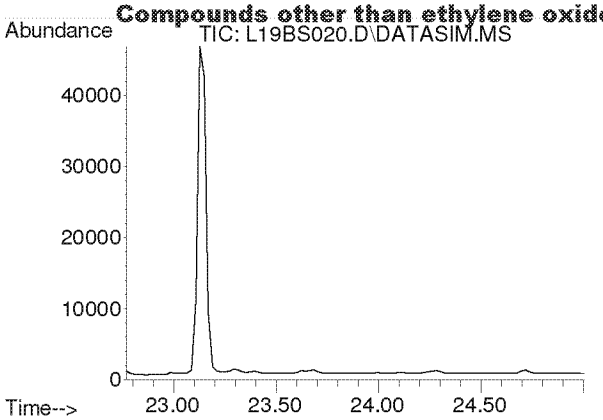
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	219.9



Compounds other than ethylene oxide were not quantitated.

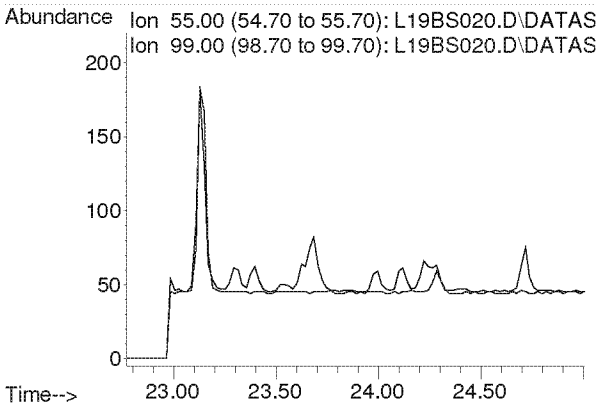


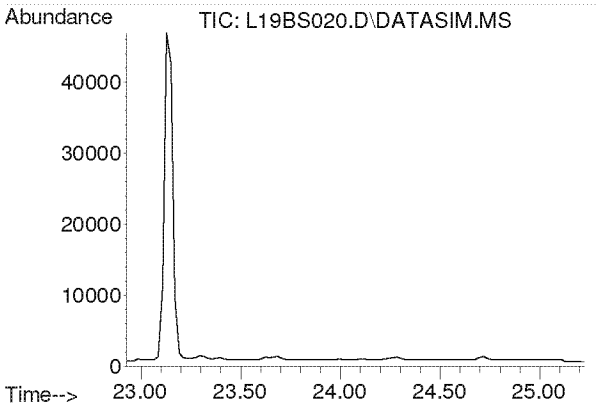
#35
Ethyl Acrylate
Concen: N.D.
Expected RT: 23.89 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
99	6.3



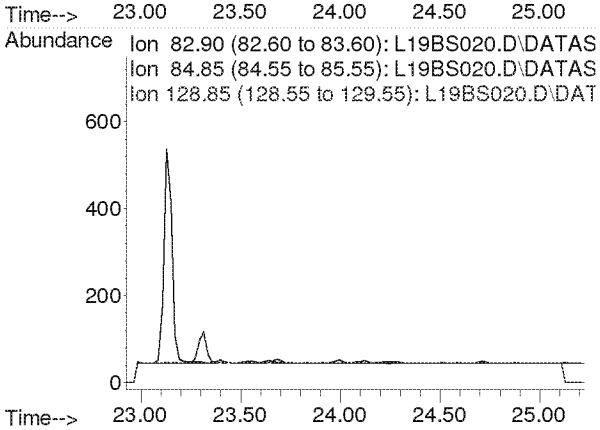


#36
Bromodichloromethane
Concen: N.D.
Expected RT: 24.08 min

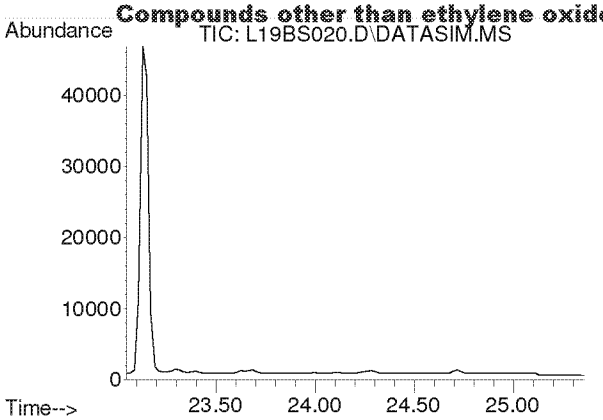
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.7
129	12.4



Compounds other than ethylene oxide were not quantitated.

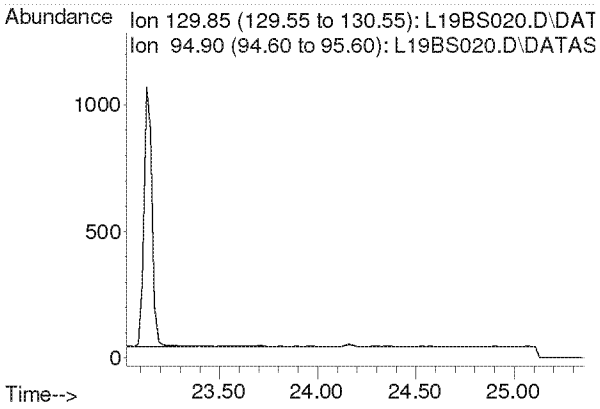


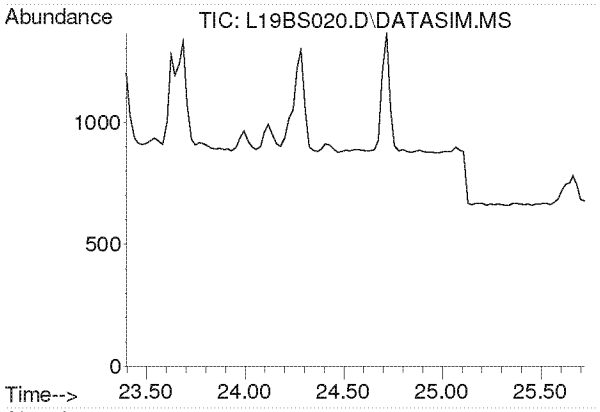
#37
Trichloroethylene
Concen: N.D.
Expected RT: 24.18 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 130

Sig	Exp Ratio
130	100
95	106.1



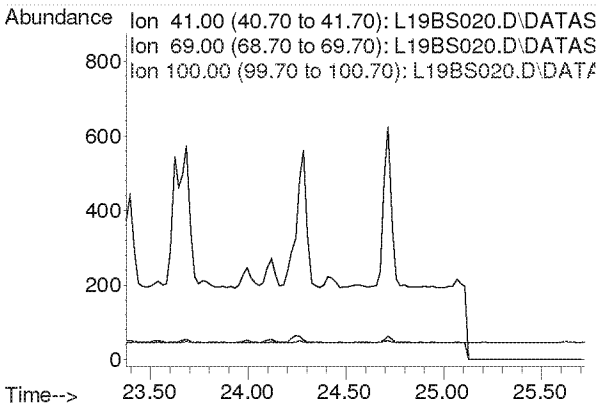


#38
Methyl Methacrylate
Concen: N.D.
Expected RT: 24.53 min

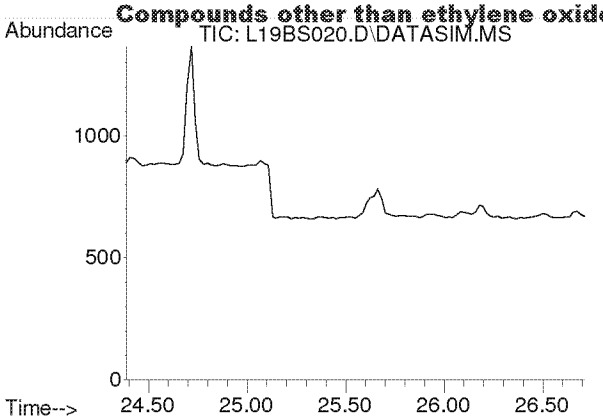
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
69	21.0
100	5.6



Compounds other than ethylene oxide were not quantitated.

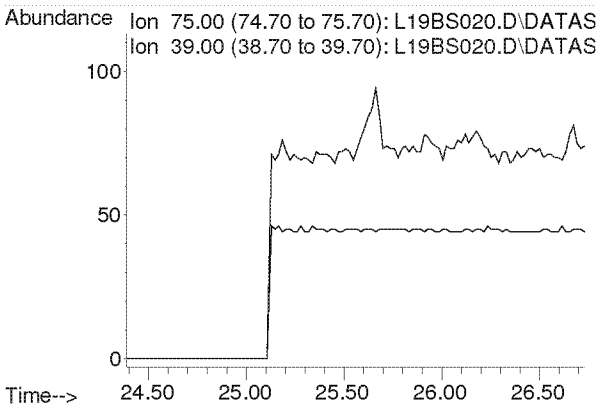


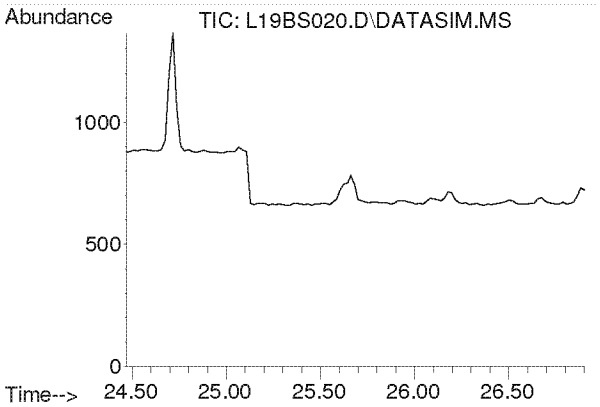
#39
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 25.53 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	54.2



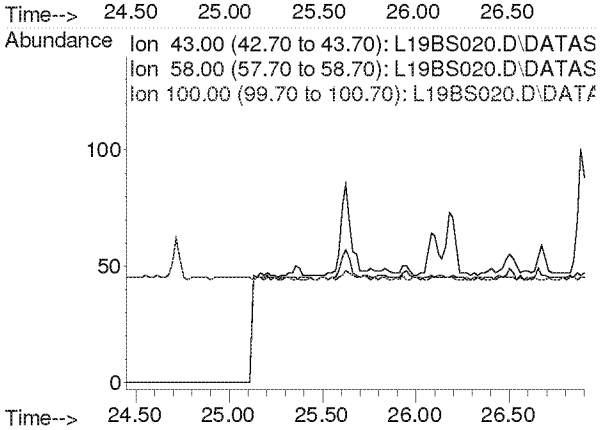


#40
Methyl Isobutyl Ketone
Concen: N.D.
Expected RT: 25.60 min

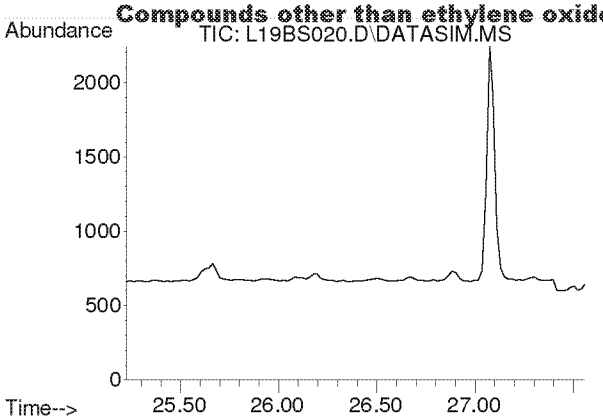
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	35.0
100	8.7



Compounds other than ethylene oxide were not quantitated.

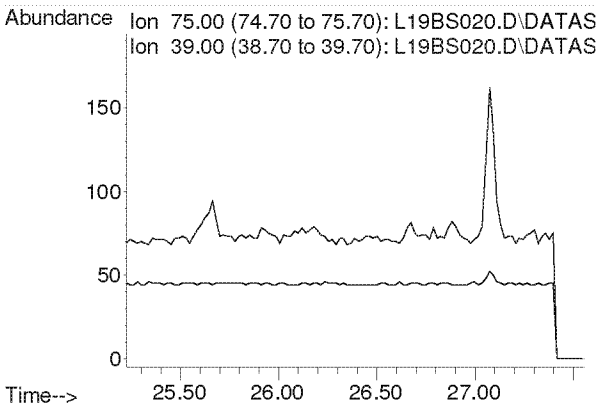


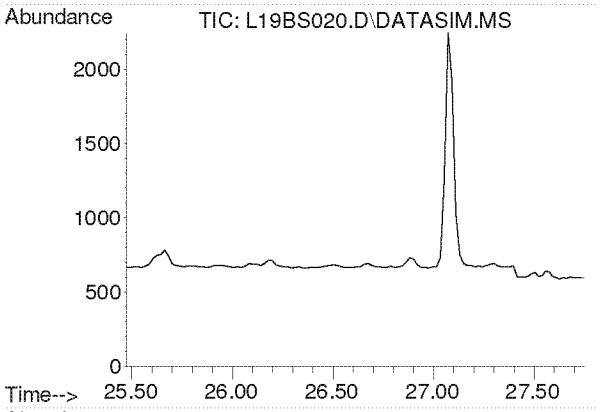
#41
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 26.37 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	53.6



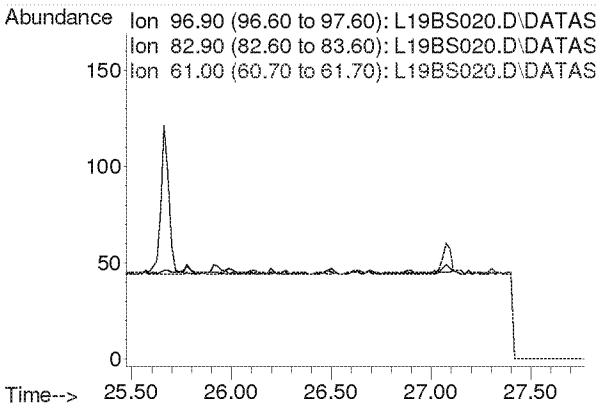


#42
1,1,2-Trichloroethane
Concen: N.D.
Expected RT: 26.62 min

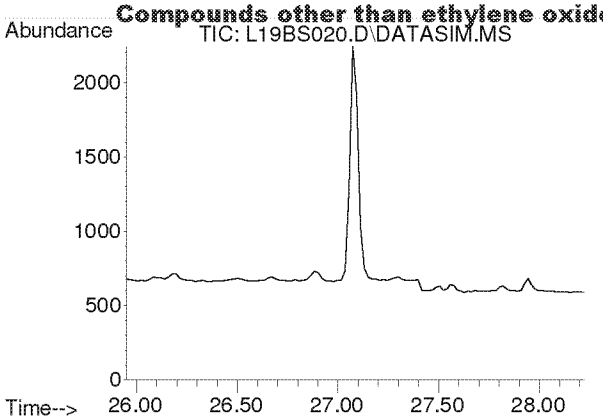
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
83	94.2
61	62.2



Compounds other than ethylene oxide were not quantitated.

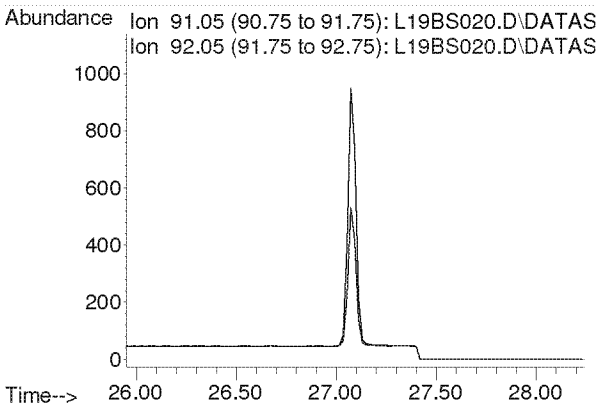


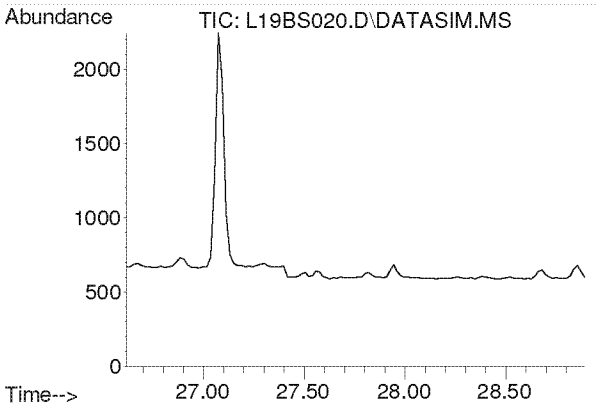
#44
Toluene
Concen: N.D.
Expected RT: 27.09 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	52.5



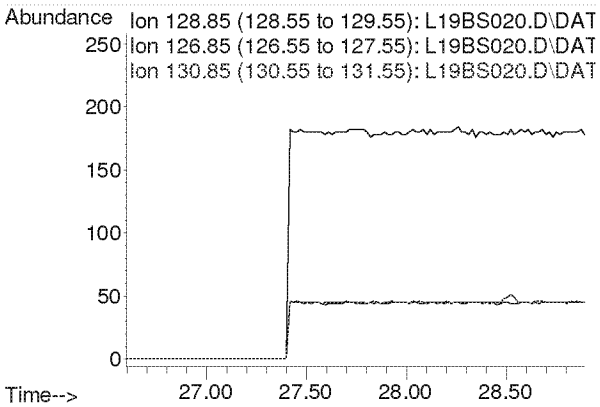


#45
Dibromochloromethane
Concen: N.D.
Expected RT: 27.75 min

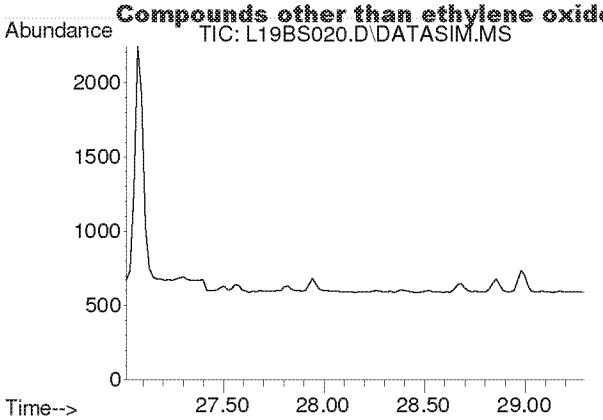
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 129

Sig	Exp Ratio
129	100
127	19.3
131	6.0



Compounds other than ethylene oxide were not quantitated.

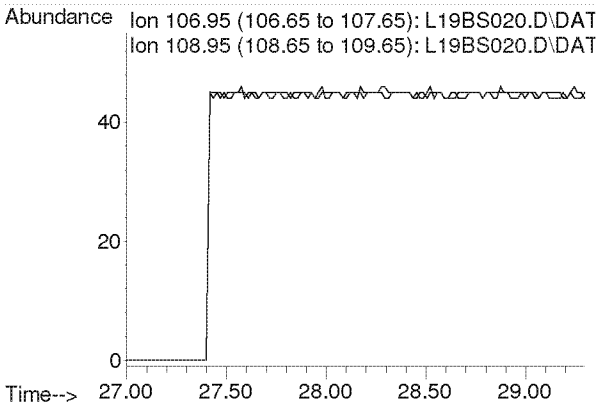


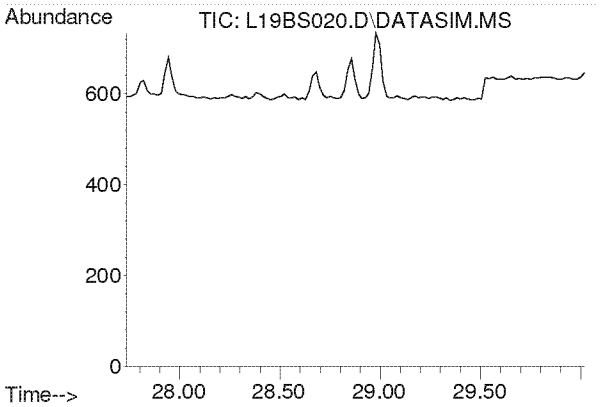
#46
1,2-Dibromoethane
Concen: N.D.
Expected RT: 28.15 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 107

Sig	Exp Ratio
107	100
109	94.2



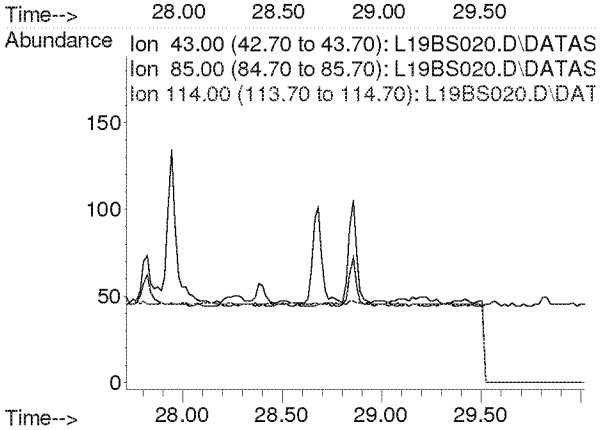


#47
n-Octane
Concen: N.D.
Expected RT: 28.87 min

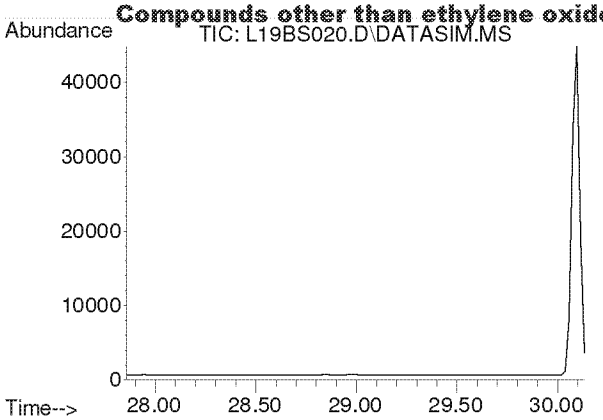
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
85	41.3
114	2.8



Compounds other than ethylene oxide were not quantitated.

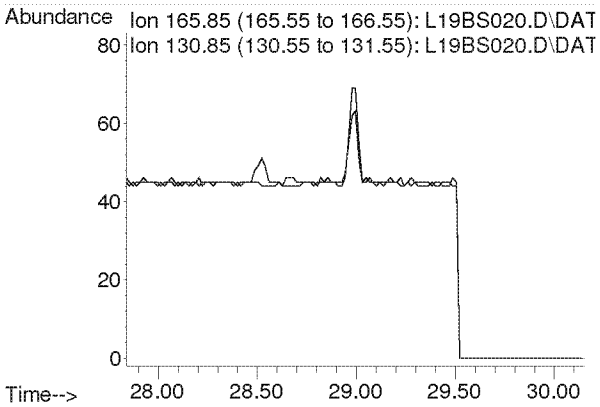


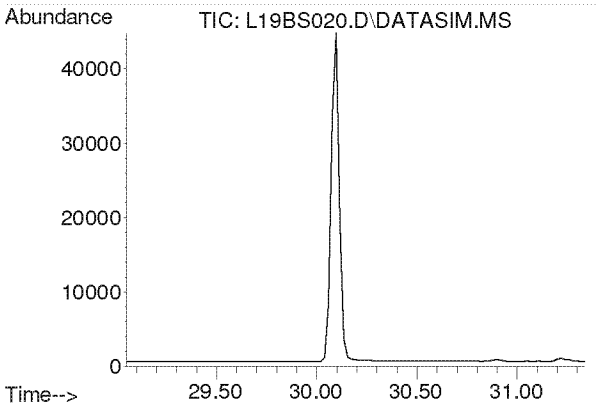
#48
Tetrachloroethylene
Concen: N.D.
Expected RT: 29.00 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 166

Sig	Exp Ratio
166	100
131	76.9



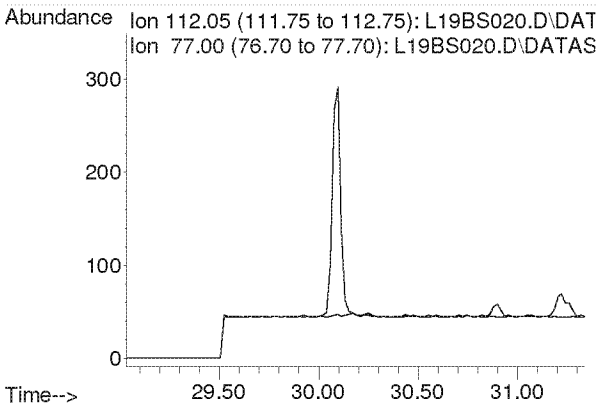


#49
Chlorobenzene
Concen: N.D.
Expected RT: 30.19 min

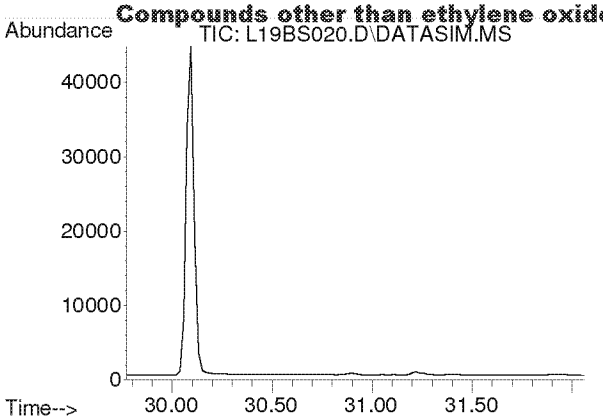
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 112

Sig	Exp Ratio
112	100
77	59.7



Compounds other than ethylene oxide were not quantitated.

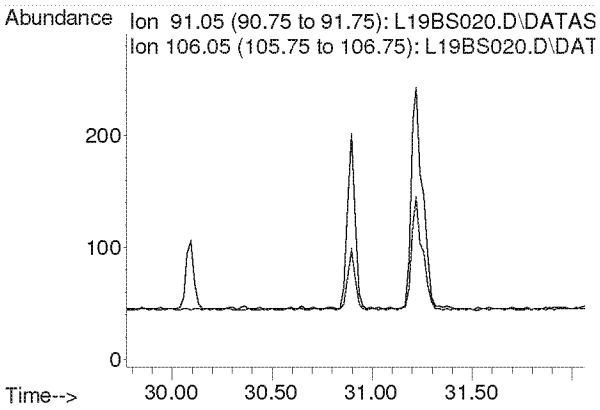


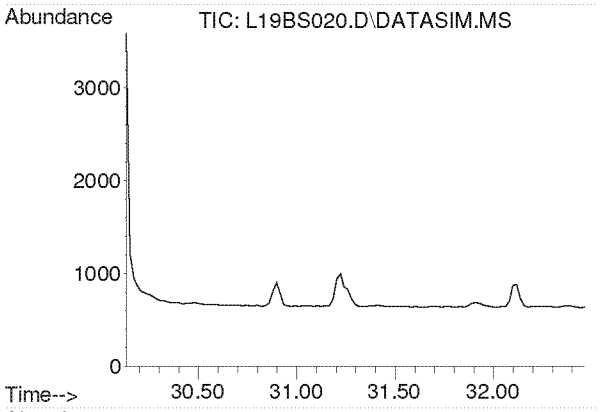
#50
Ethylbenzene
Concen: N.D.
Expected RT: 30.92 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	32.5



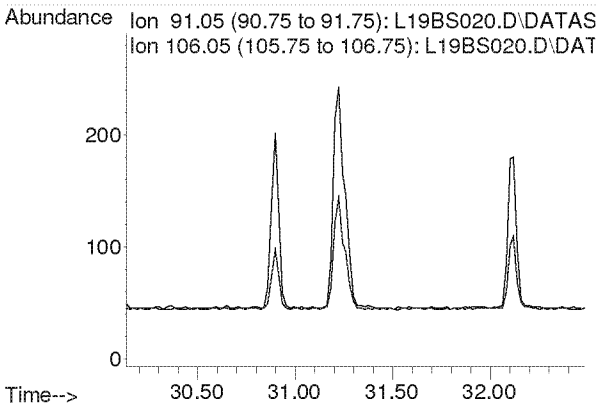


#51
m,p-Xylene
Concen: N.D.
Expected RT: 31.28 min

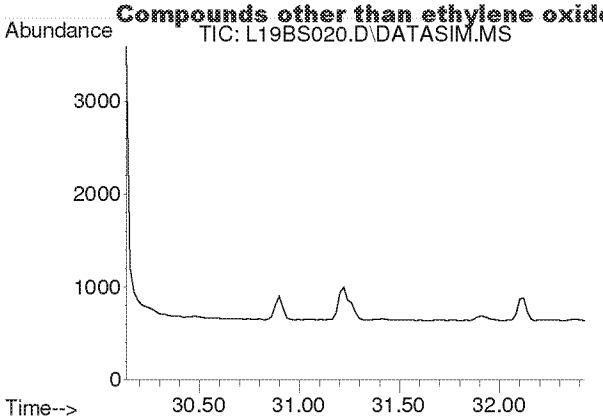
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	46.6



Compounds other than ethylene oxide were not quantitated.

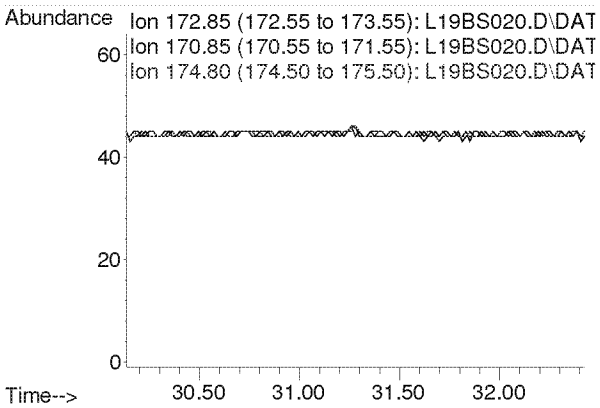


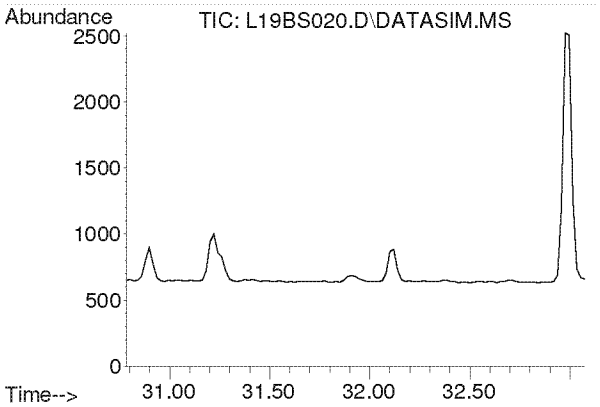
#52
Bromoform
Concen: N.D.
Expected RT: 31.28 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 173

Sig	Exp Ratio
173	100
171	51.3
175	48.9



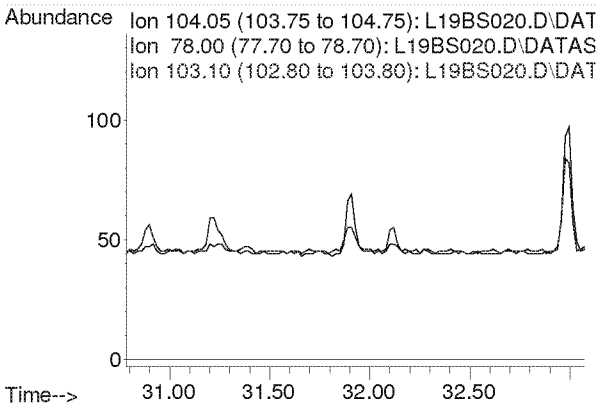


#53
Styrene
Concen: N.D.
Expected RT: 31.93 min

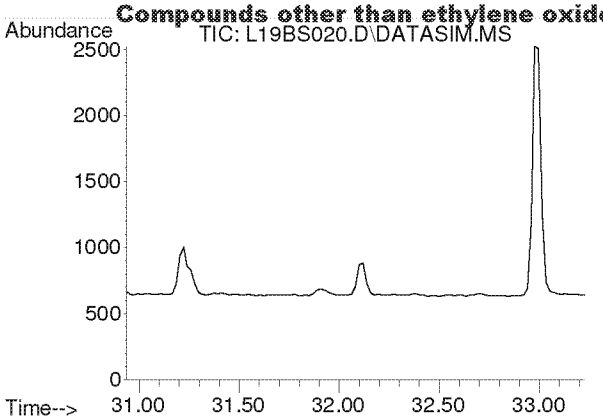
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 104

Sig	Exp Ratio
104	100
78	44.3
103	0.0



Compounds other than ethylene oxide were not quantitated.

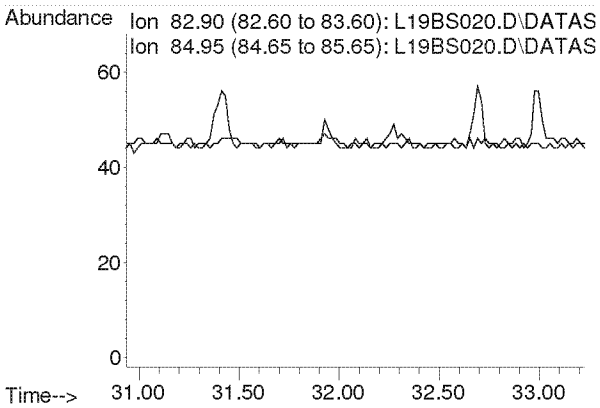


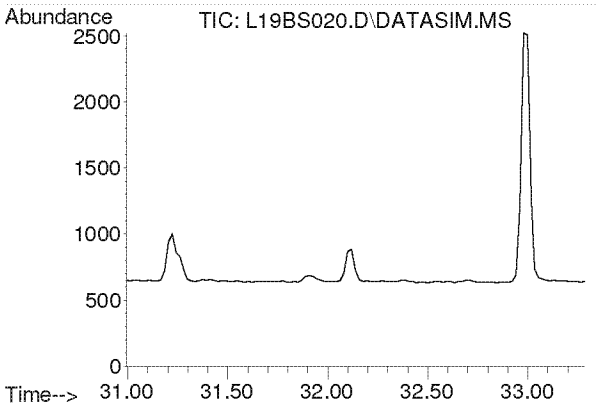
#54
1,1,2,2-Tetrachloroethane
Concen: N.D.
Expected RT: 32.08 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.5



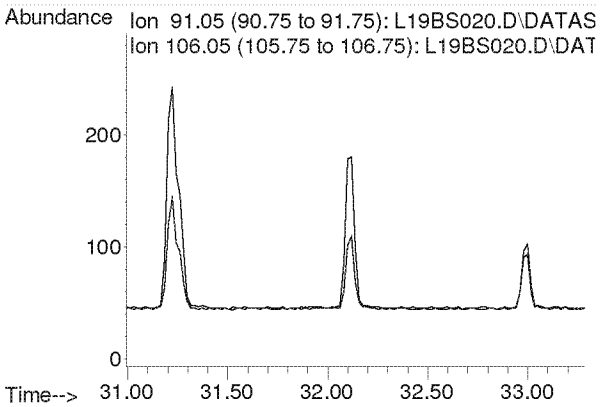


#55
o-Xylene
Concen: N.D.
Expected RT: 32.14 min

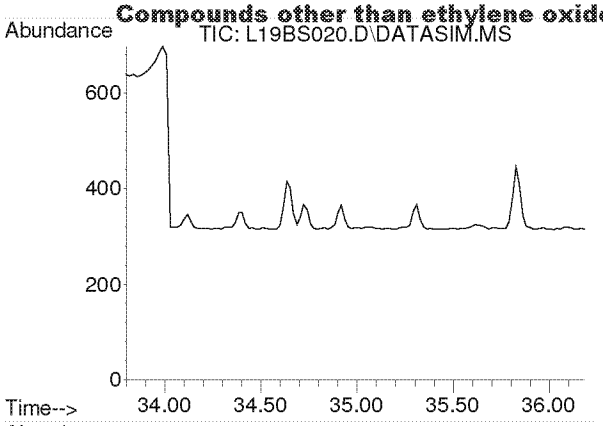
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	45.8



Compounds other than ethylene oxide were not quantitated.

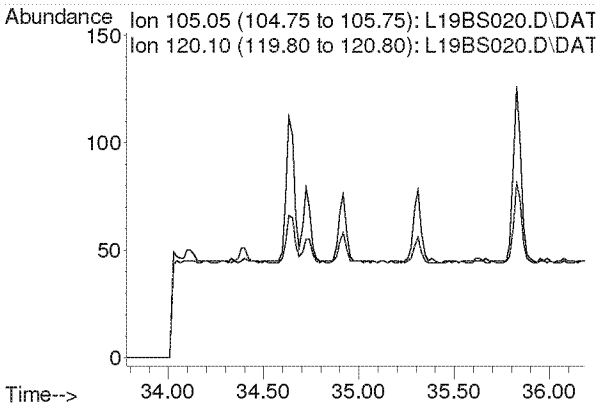


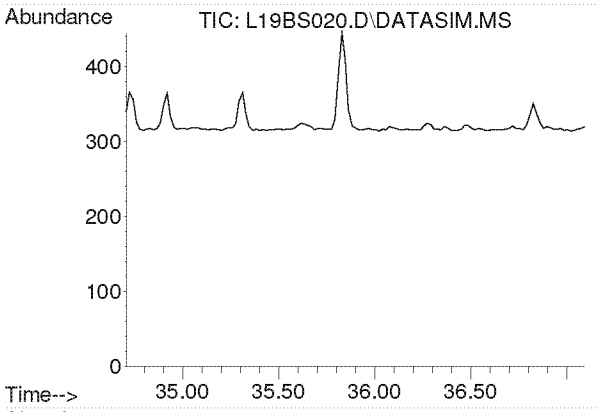
#56
1,3,5-Trimethylbenzene
Concen: N.D.
Expected RT: 34.94 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	46.0



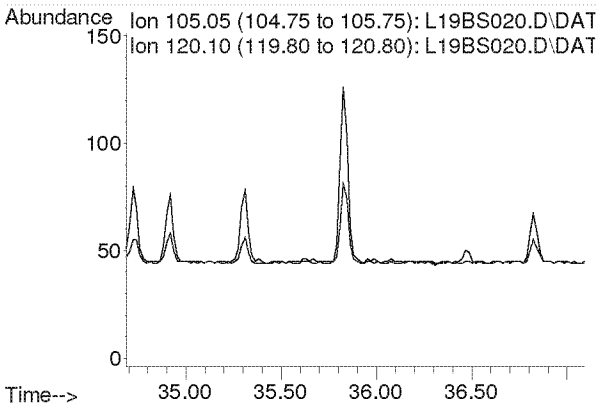


#57
1,2,4-Trimethylbenzene
Concen: N.D.
Expected RT: 35.85 min

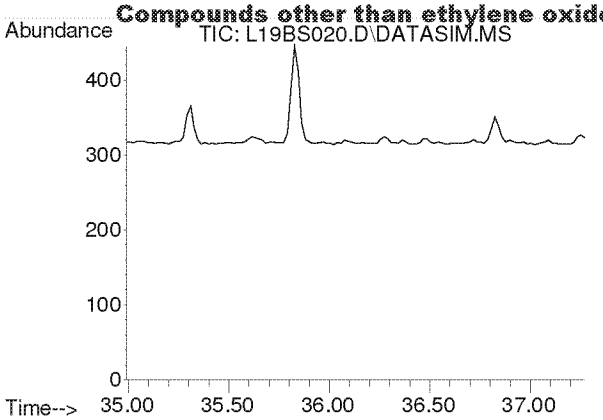
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	44.0



Compounds other than ethylene oxide were not quantitated.

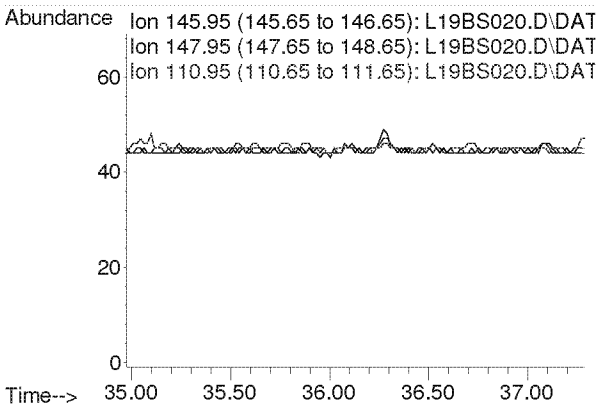


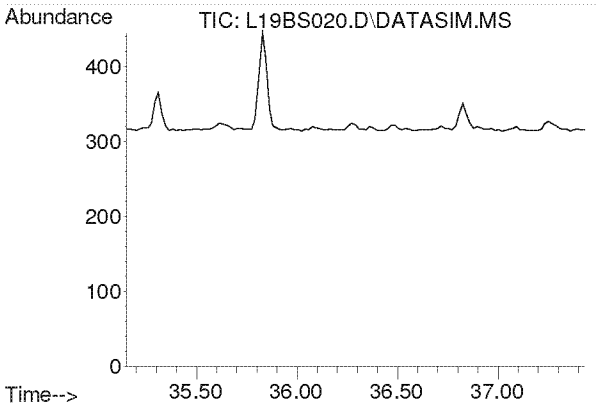
#58
m-Dichlorobenzene
Concen: N.D.
Expected RT: 36.13 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.1
111	40.1



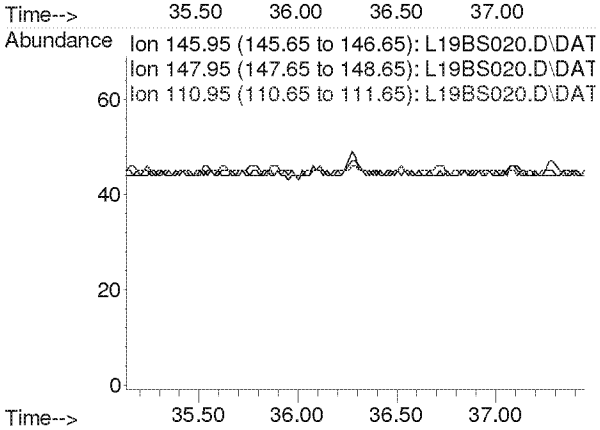


#59
p-Dichlorobenzene
Concen: N.D.
Expected RT: 36.29 min

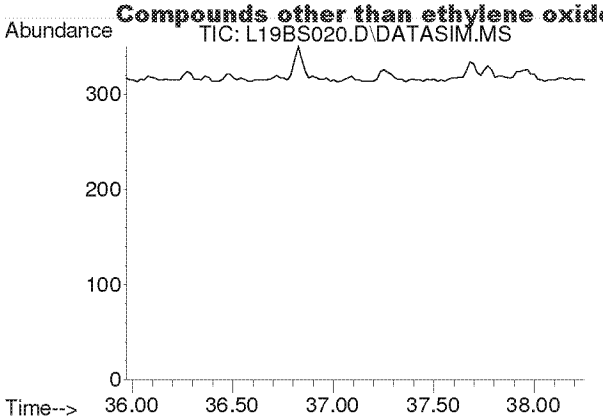
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.3
111	38.7



Compounds other than ethylene oxide were not quantitated.

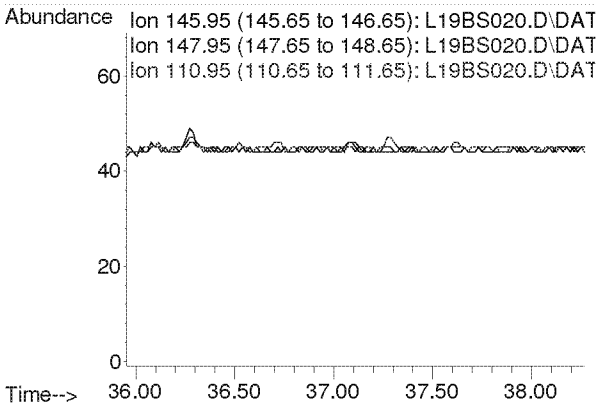


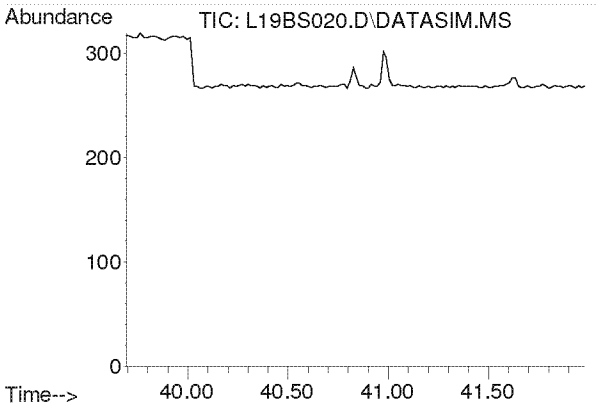
#60
o-Dichlorobenzene
Concen: N.D.
Expected RT: 37.11 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.8



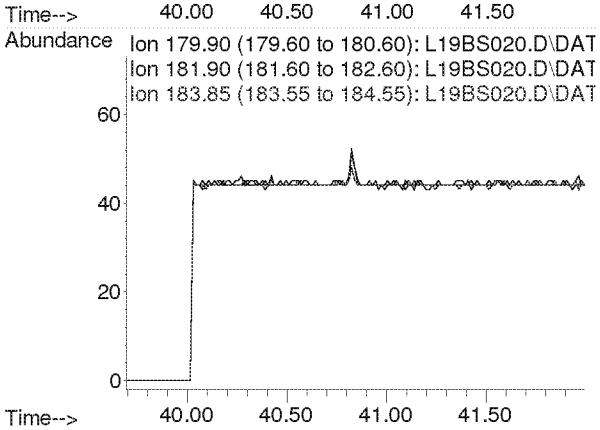


#61
1,2,4-Trichlorobenzene
Concen: N.D.
Expected RT: 40.84 min

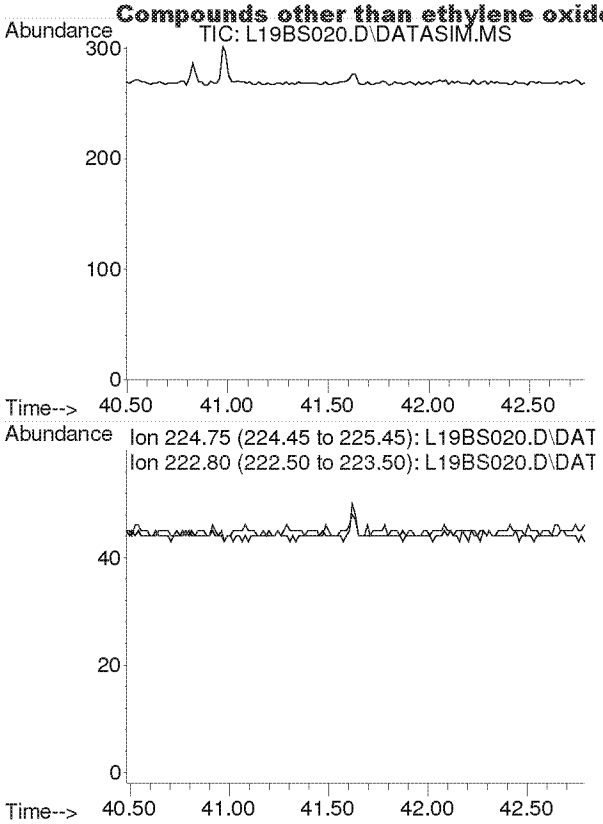
Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 180

Sig	Exp Ratio
180	100
182	94.6
184	30.2



Compounds other than ethylene oxide were not quantitated.



#62
Hexachloro-1,3-butadiene
Concen: N.D.
Expected RT: 41.63 min

Lab File: L19BS020.D
Acq: 20 Feb 2019 5:57 am

Tgt Ion: 225

Sig	Exp Ratio
225	100
223	62.4

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS021.D
Acq On : 20 Feb 2019 6:59 am (#1); 20-Feb-19, 06:54:08 (#2)
Operator : MAH
Sample : 9021401-06
Misc : WATER TOWER 2/12/19 (Sig #1); (Sig #2)
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 20 14:47:09 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

ETOX only

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) IS-Hexane-d14	19.970	66	36838	4.7700 ppbv	-0.02
29) IS-1,4-Difluorobenzene	23.151	114	88713	4.9900 ppbv	0.00
43) IS-Chlorobenzene-d5	30.097	117	68123	4.7400 ppbv	-0.02

System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D. d	
3) Propylene	0.000	41	0	N.D. d	
4) Dichlorodifluoromethane	0.000	85	0	N.D. d	
5) Chloromethane	0.000	50	0	N.D. d	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D. d	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D. d	
9) Ethylene oxide	0.000	29	0	N.D. d SL	
10) Bromomethane	0.000	94	0	N.D. d	
11) Chloroethane	0.000	64	0	N.D.	
12) Acetonitrile	0.000	41	0	N.D. d	
13) Acrolein	0.000	56	0	N.D. d	
14) Trichlorofluoromethane	0.000	101	0	N.D. d	
15) Acrylonitrile	0.000	53	0	N.D.	
16) 1,1-Dichloroethene	0.000	61	0	N.D.	
17) Methylene Chloride	0.000	49	0	N.D. d	
18) Carbon Disulfide	0.000	76	0	N.D. d	
19) Trichlorotrifluoroethane	0.000	101	0	N.D. d	
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) 1,1-Dichloroethane	0.000	63	0	N.D.	
22) Methyl tert-Butyl Ether	0.000	73	0	N.D. d	
23) Chloroprene	0.000	53	0	N.D.	
24) cis-1,2-Dichloroethylene	0.000	61	0	N.D.	
25) Bromochloromethane	0.000	128	0	N.D.	
26) Chloroform	0.000	83	0	N.D. d	
27) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
28) 1,2-Dichloroethane	0.000	62	0	N.D. d	
30) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
31) Benzene	0.000	78	0	N.D. d	
32) Carbon Tetrachloride	0.000	117	0	N.D. d	
33) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) 1,2-Dichloropropane	0.000	63	0	N.D.	
35) Ethyl Acrylate	0.000	55	0	N.D.	
36) Bromodichloromethane	0.000	83	0	N.D.	
37) Trichloroethylene	0.000	130	0	N.D.	
38) Methyl Methacrylate	0.000	41	0	N.D. d	
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	0.000	43	0	N.D. d	
41) trans-1,3-Dichloropropene	0.000	75	0	N.D.	
42) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
44) Toluene	0.000	91	0	N.D. d	
45) Dibromochloromethane	0.000	129	0	N.D.	
46) 1,2-Dibromoethane	0.000	107	0	N.D.	
47) n-Octane	0.000	43	0	N.D. d	
48) Tetrachloroethylene	0.000	166	0	N.D. d	
49) Chlorobenzene	0.000	112	0	N.D.	
50) Ethylbenzene	0.000	91	0	N.D. d	

Compounds other than ethylene oxide were not quantitated

Quantification Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS021.D
Acq On : 20 Feb 2019 6:59 am (#1); 20-Feb-19, 06:54:08 (#2)
Operator : MAH
Sample : 9021401-06
Misc : WATER TOWER 2/12/19 (Sig #1); (Sig #2)
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 20 14:47:09 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

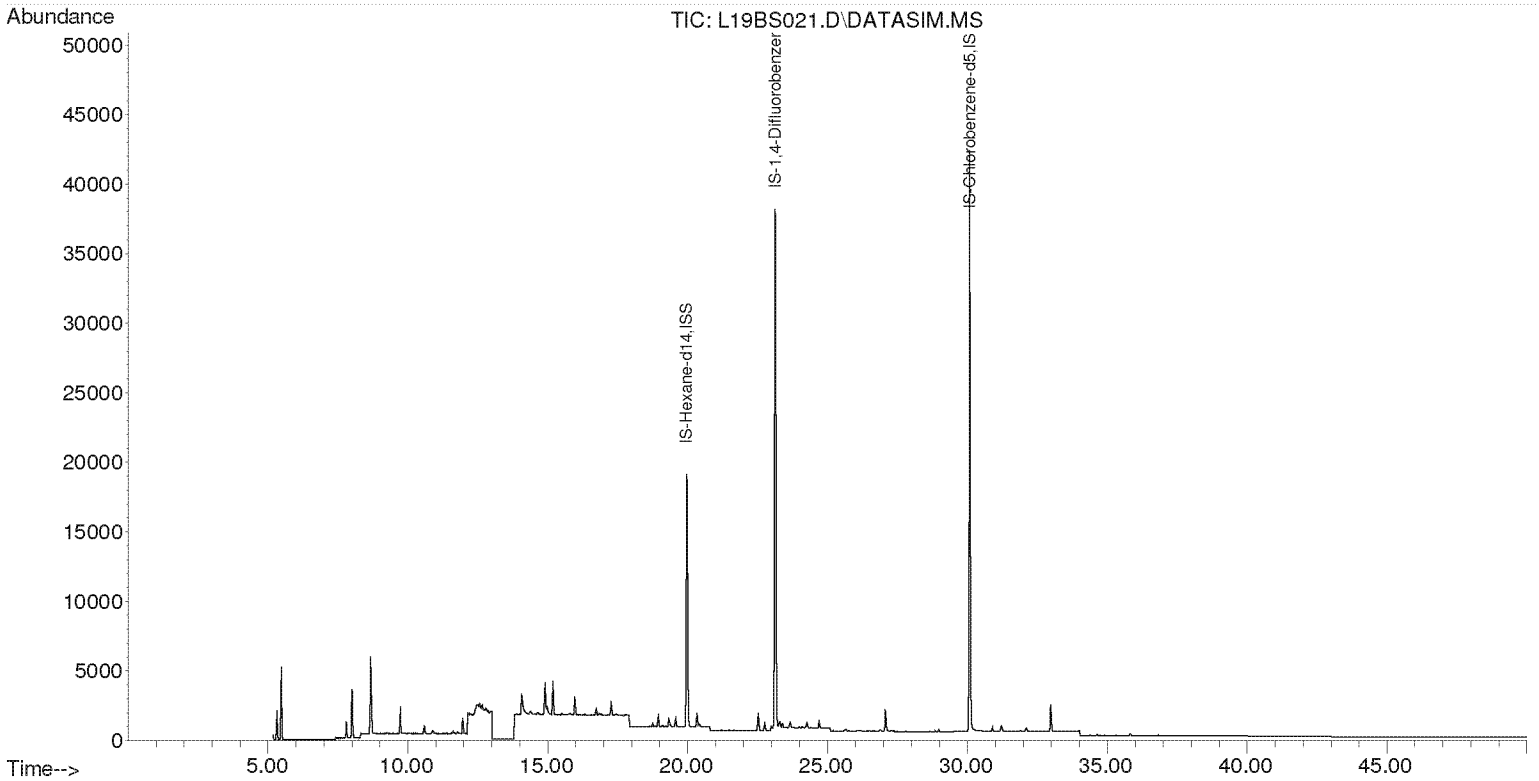
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	0.000	91	0	N.D.	d
52) Bromoform	0.000	173	0	N.D.	
53) Styrene	0.000	104	0	N.D.	d
54) 1,1,2,2-Tetrachloroethane	0.000	83	0	N.D.	
55) o-Xylene	0.000	91	0	N.D.	d
56) 1,3,5-Trimethylbenzene	0.000	105	0	N.D.	d
57) 1,2,4-Trimethylbenzene	0.000	105	0	N.D.	d
58) m-Dichlorobenzene	0.000	146	0	N.D.	
59) p-Dichlorobenzene	0.000	146	0	N.D.	
60) o-Dichlorobenzene	0.000	146	0	N.D.	
61) 1,2,4-Trichlorobenzene	0.000	180	0	N.D.	
62) Hexachloro-1,3-butadiene	0.000	225	0	N.D.	

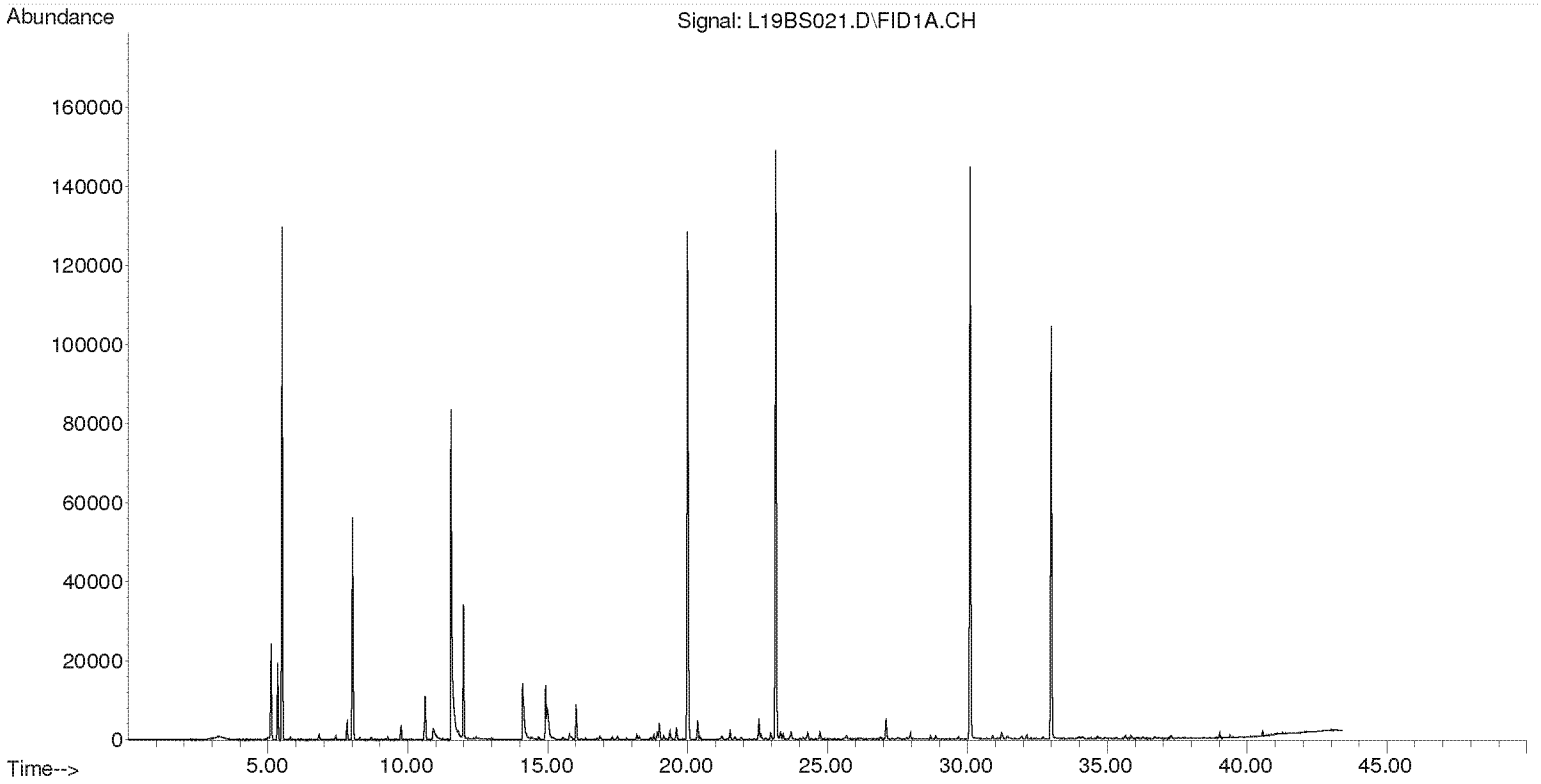
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Compounds other than ethylene oxide were not quantitated.

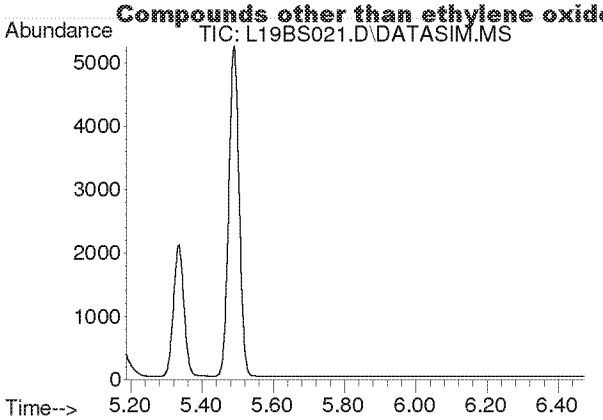
Data Path : Y:\MASS SPEC 1 DATA\L19BS\
Data File : L19BS021.D
Acq On : 20 Feb 2019 6:59 am (#1); 20 Feb 2019 6:54 am (#2)
Operator : MAH
Sample : 9021401-06
Misc : WATER TOWER 2/12/19 (Sig #1); (Sig #2)
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Feb 20 13:54:39 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration





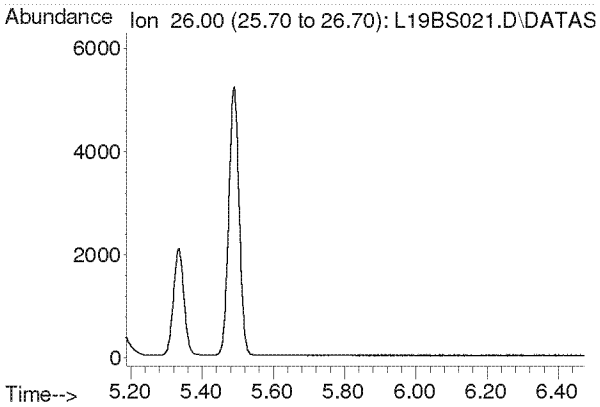
Compounds other than ethylene oxide were not quantitated.

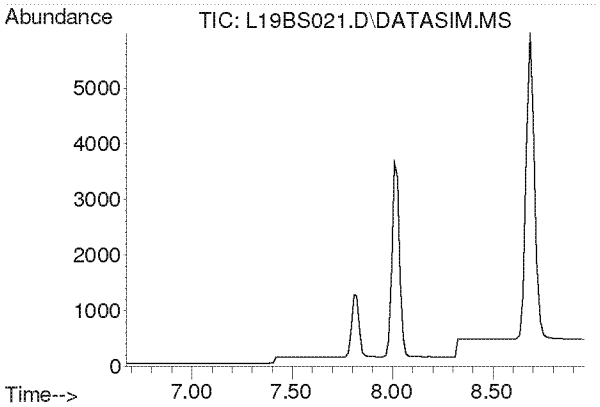


#2
Acetylene
Concen: N.D.
Expected RT: 5.40 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 26



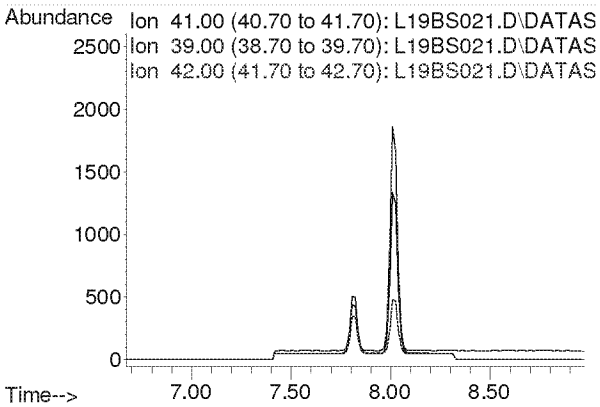


#3
Propylene
Concen: N.D.
Expected RT: 7.82 min

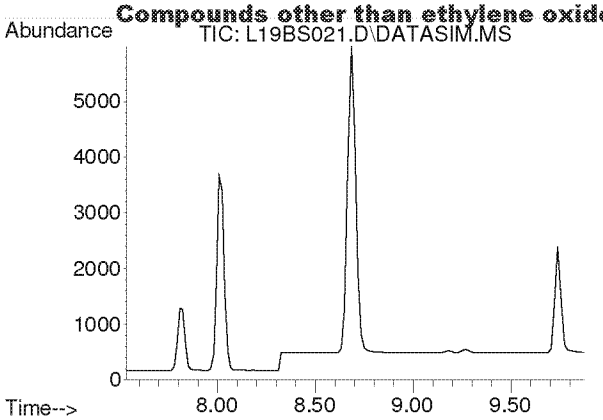
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
39	80.2
42	65.8



Compounds other than ethylene oxide were not quantitated.

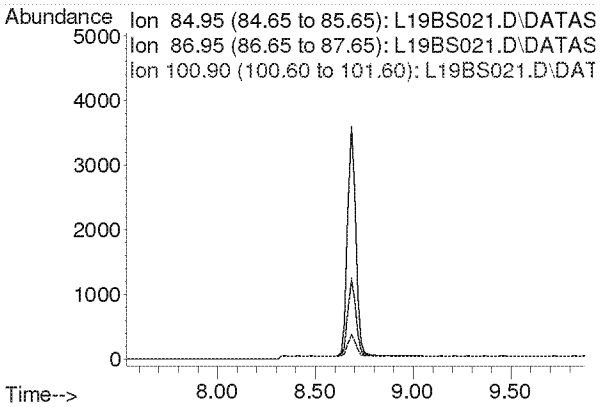


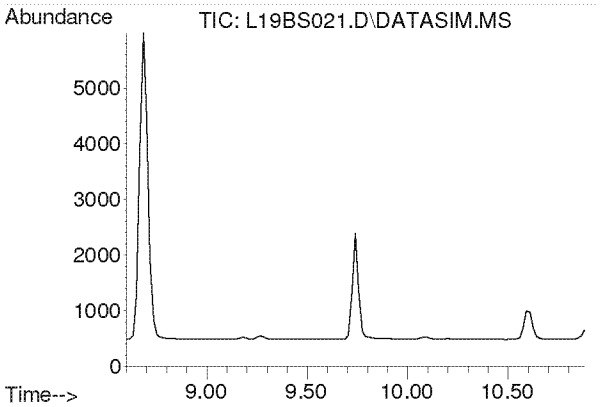
#4
Dichlorodifluoromethane
Concen: N.D.
Expected RT: 8.69 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
87	32.5
101	9.1



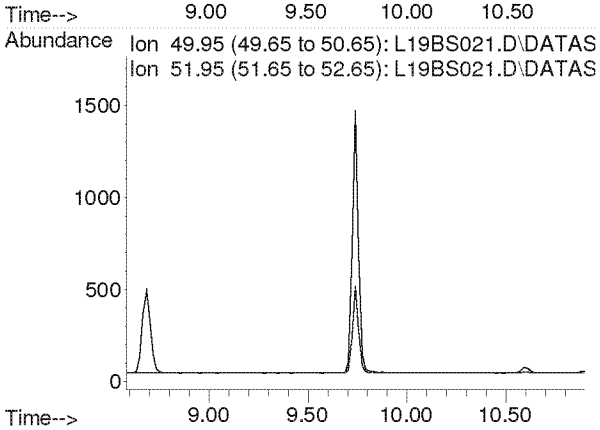


#5
Chloromethane
Concen: N.D.
Expected RT: 9.74 min

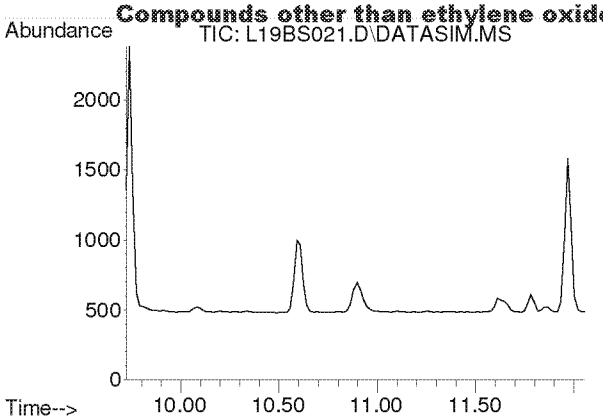
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 50

Sig	Exp Ratio
50	100
52	32.6



Compounds other than ethylene oxide were not quantitated.

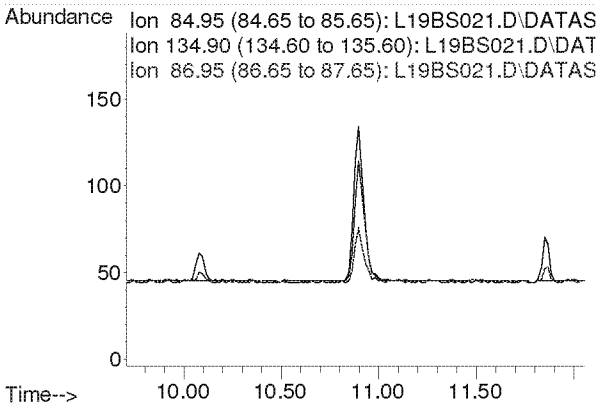


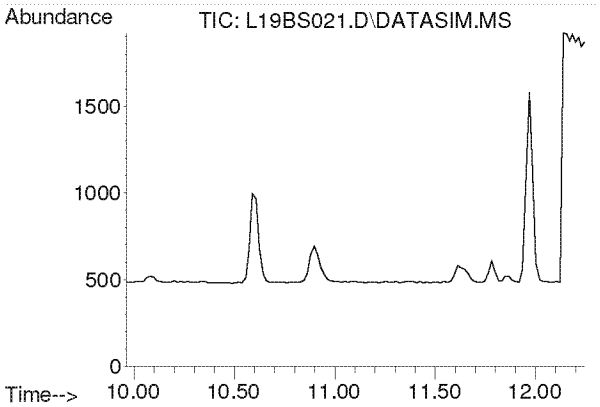
#6
Dichlorotetrafluoroethane
Concen: N.D.
Expected RT: 10.86 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
135	79.0
87	32.4



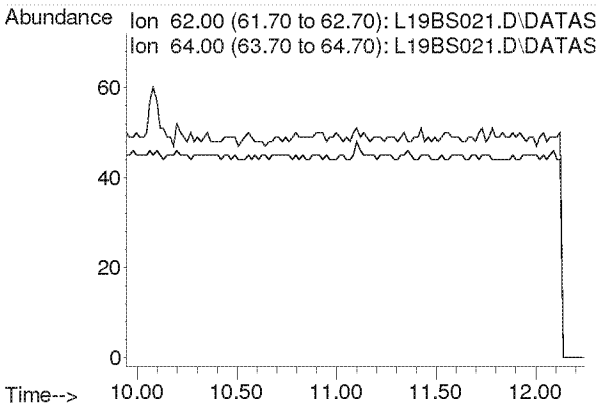


#7
Vinyl Chloride
Concen: N.D.
Expected RT: 11.10 min

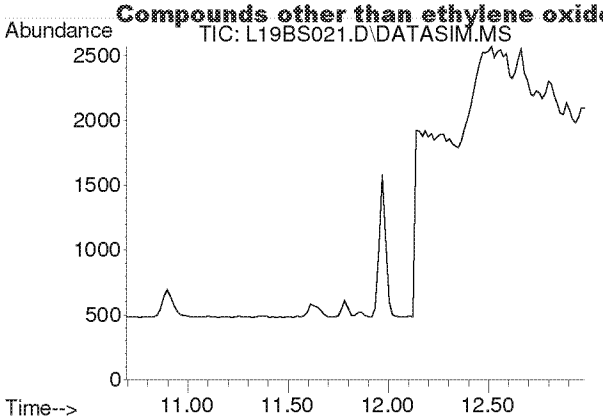
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	31.7



Compounds other than ethylene oxide were not quantitated.

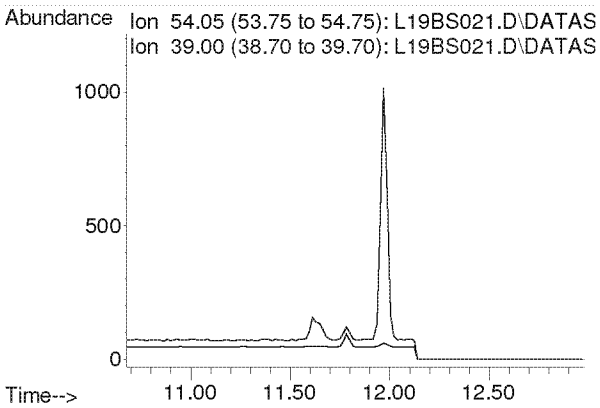


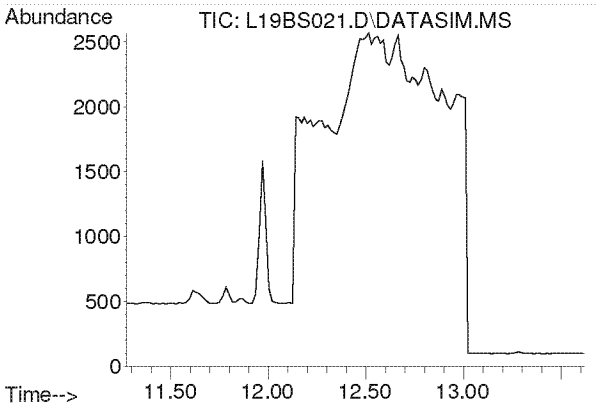
#8
1,3-Butadiene
Concen: N.D.
Expected RT: 11.78 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 54

Sig	Exp Ratio
54	100
39	102.0



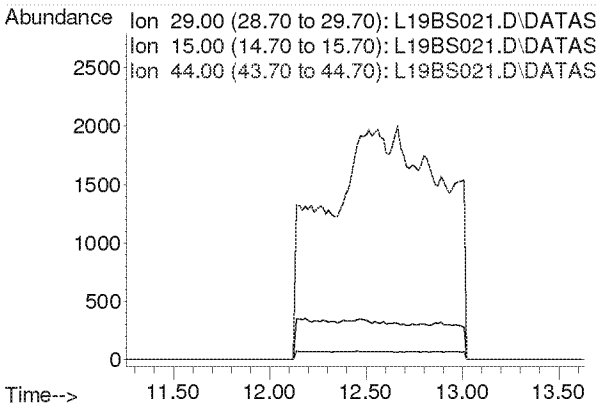


#9
Ethylene oxide
Concen: N.D.
Expected RT: 12.38 min

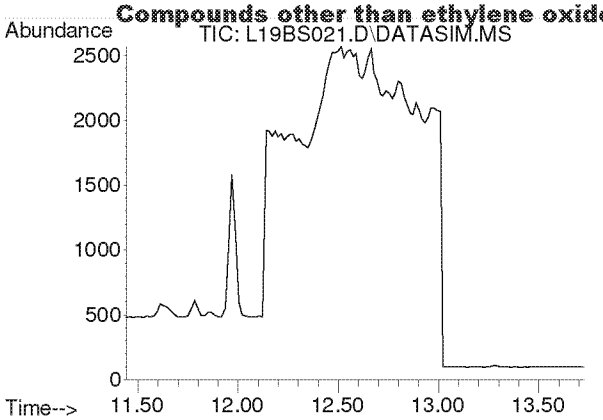
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 29

Sig	Exp Ratio
29	100
15	20.0
44	81.8



Compounds other than ethylene oxide were not quantitated.

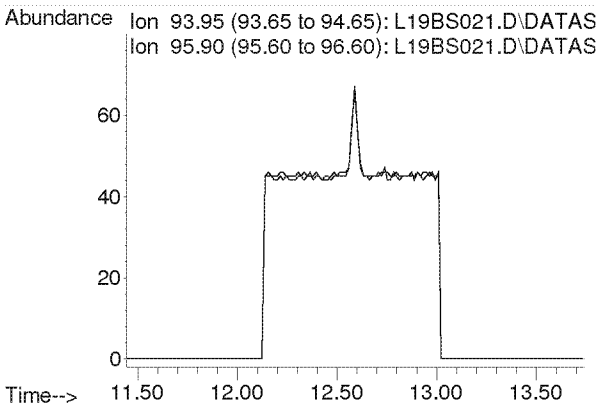


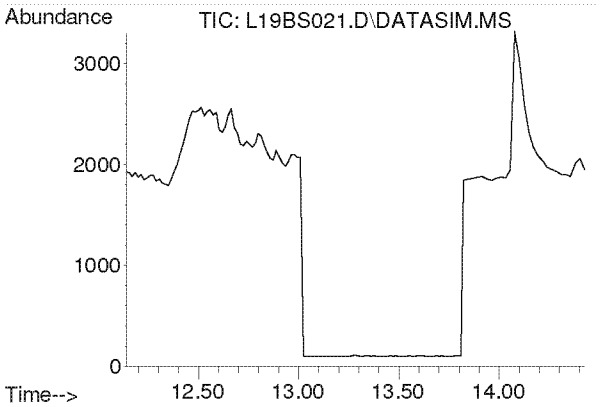
#10
Bromomethane
Concen: N.D.
Expected RT: 12.59 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 94

Sig	Exp Ratio
94	100
96	94.4



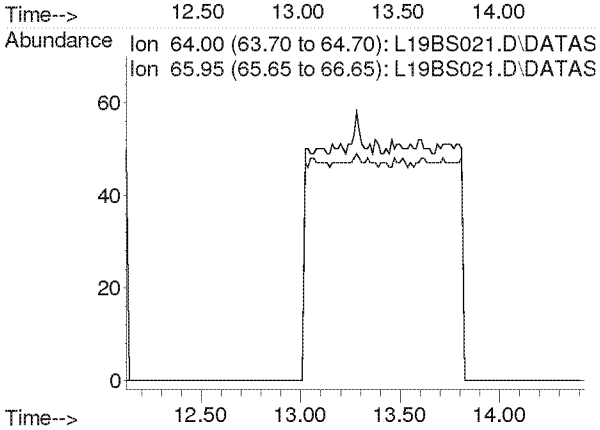


#11
Chloroethane
Concen: N.D.
Expected RT: 13.28 min

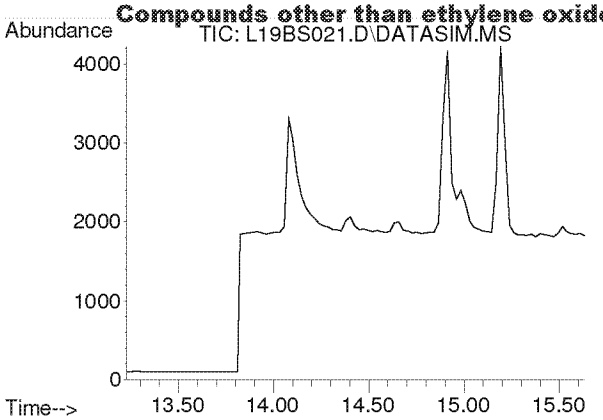
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



Compounds other than ethylene oxide were not quantitated.

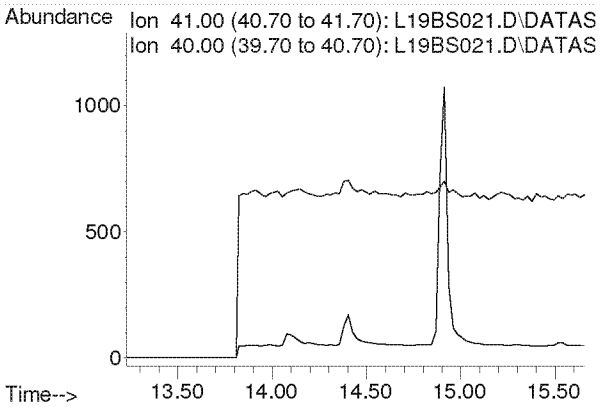


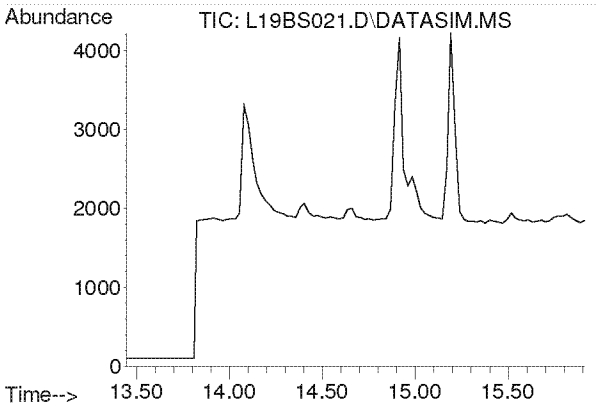
#12
Acetonitrile
Concen: N.D.
Expected RT: 14.36 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
40	52.8



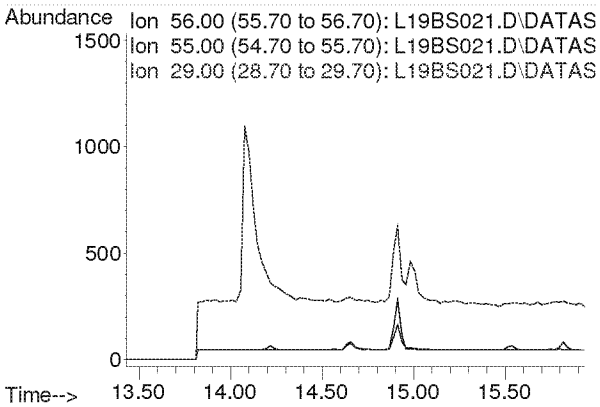


#13
Acrolein
Concen: N.D.
Expected RT: 14.63 min

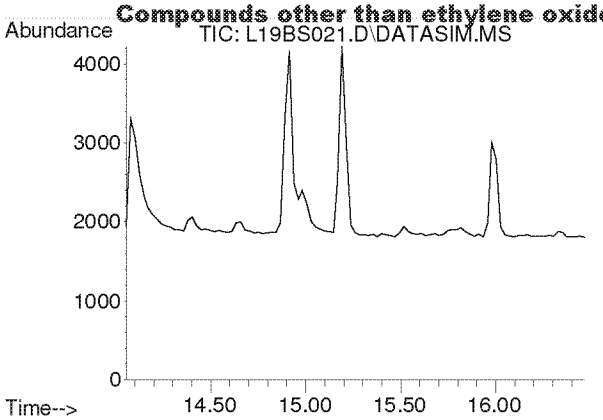
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 56

Sig	Exp Ratio
56	100
55	76.0
29	54.7



Compounds other than ethylene oxide were not quantitated.

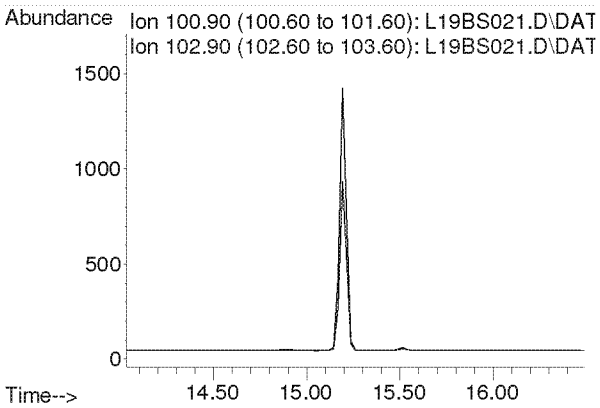


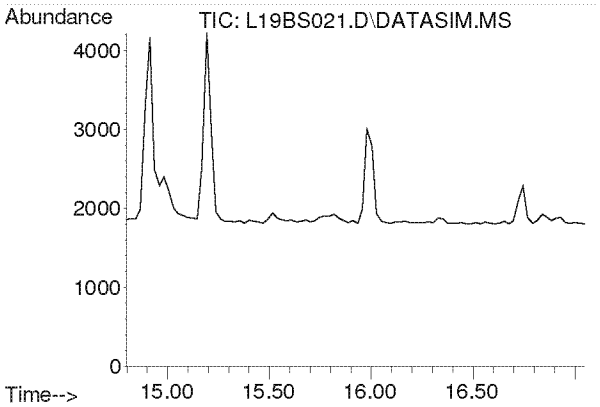
#14
Trichlorofluoromethane
Concen: N.D.
Expected RT: 15.19 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
103	64.6



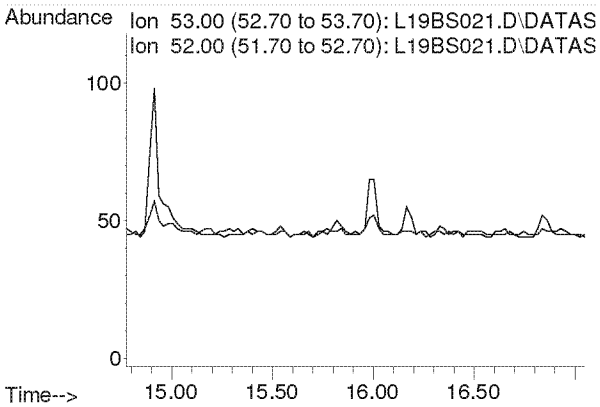


#15
Acrylonitrile
Concen: N.D.
Expected RT: 15.93 min

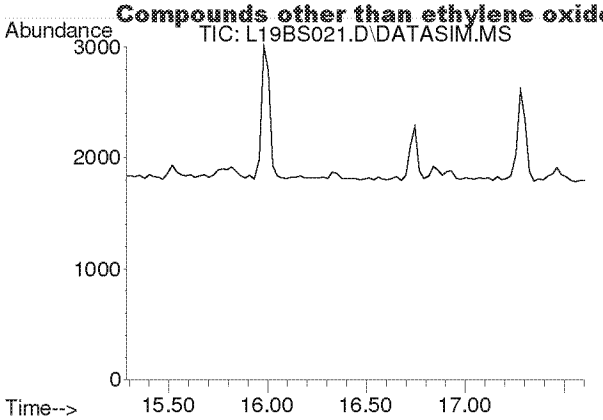
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
52	86.9



Compounds other than ethylene oxide were not quantitated.

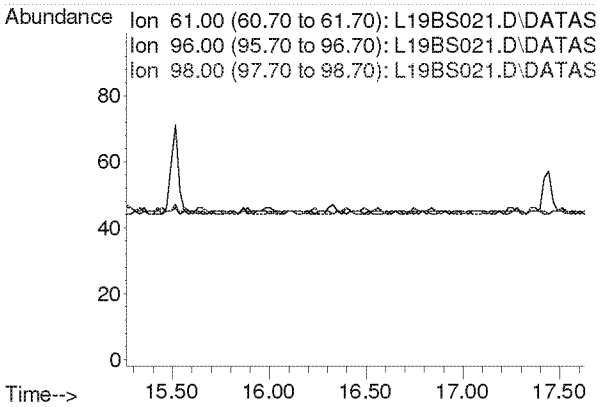


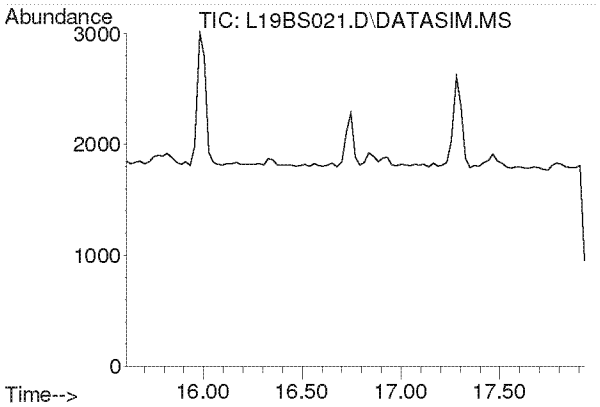
#16
1,1-Dichloroethene
Concen: N.D.
Expected RT: 16.42 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	59.1
98	38.2



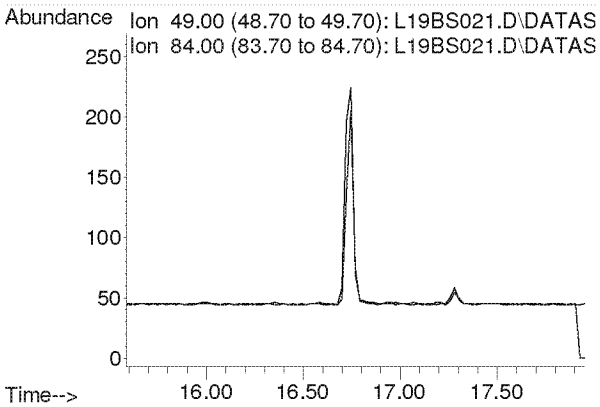


#17
Methylene Chloride
Concen: N.D.
Expected RT: 16.74 min

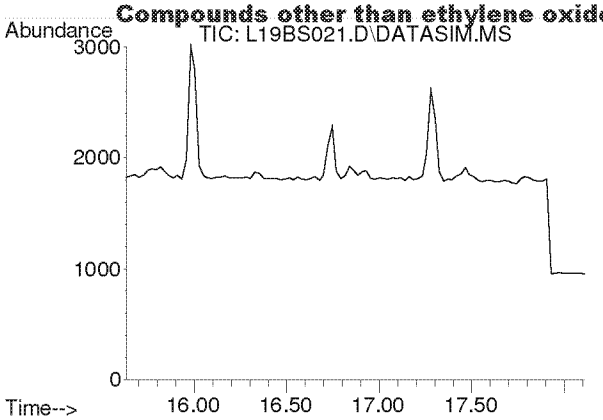
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 49

Sig	Exp Ratio
49	100
84	77.2



Compounds other than ethylene oxide were not quantitated.

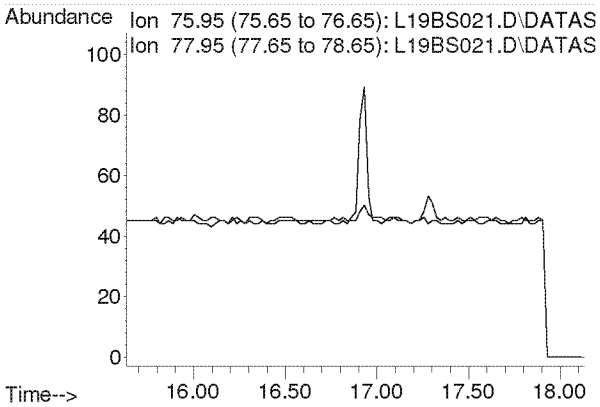


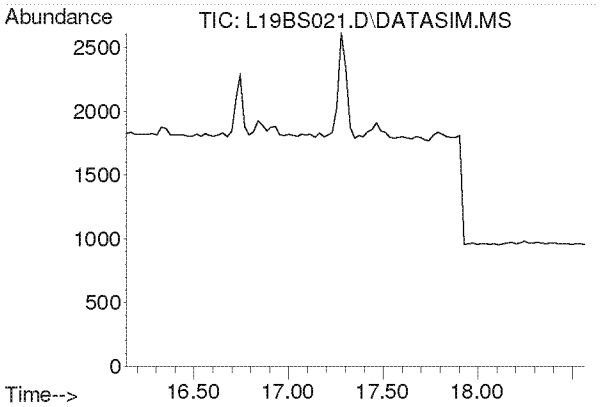
#18
Carbon Disulfide
Concen: N.D.
Expected RT: 16.93 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 76

Sig	Exp Ratio
76	100
78	9.2



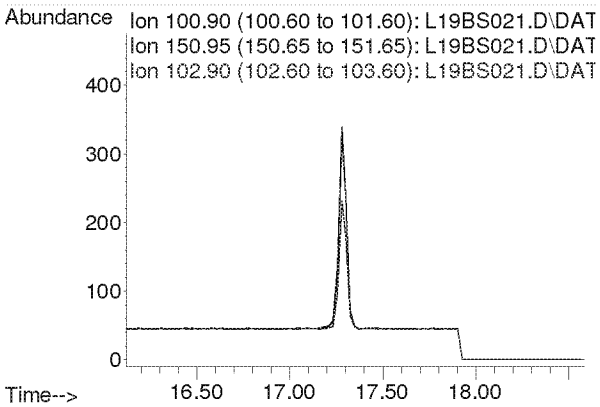


#19
Trichlorotrifluoroethane
Concen: N.D.
Expected RT: 17.28 min

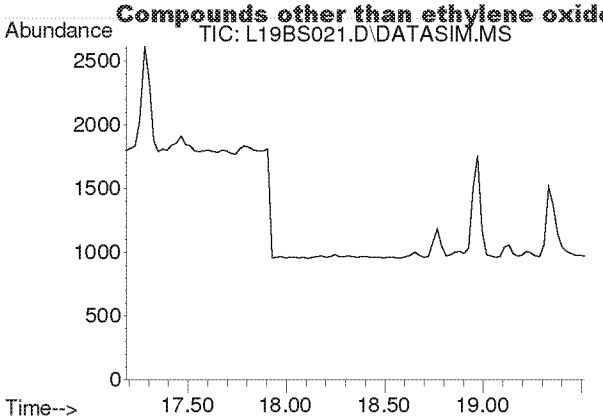
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
151	94.8
103	63.9



Compounds other than ethylene oxide were not quantitated.

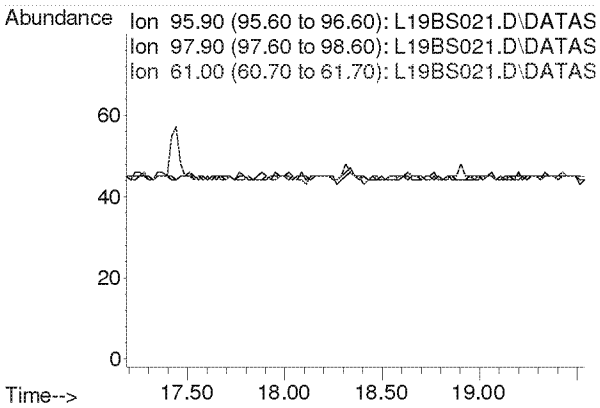


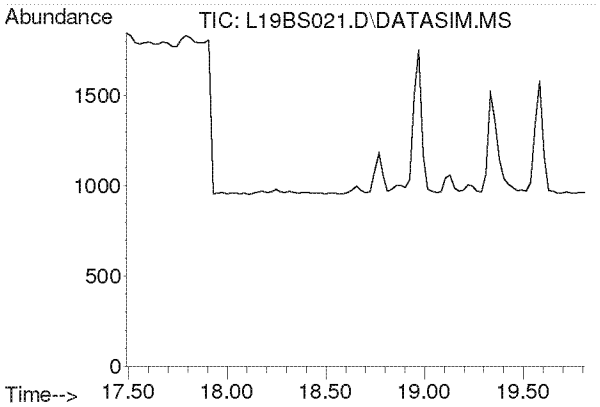
#20
trans-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 18.34 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 96

Sig	Exp Ratio
96	100
98	64.4
61	153.6



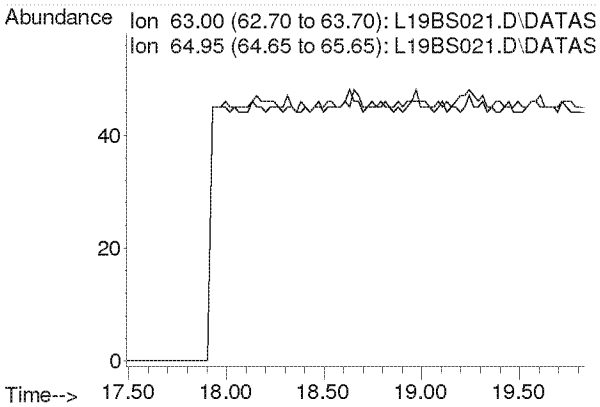


#21
1,1-Dichloroethane
Concen: N.D.
Expected RT: 18.63 min

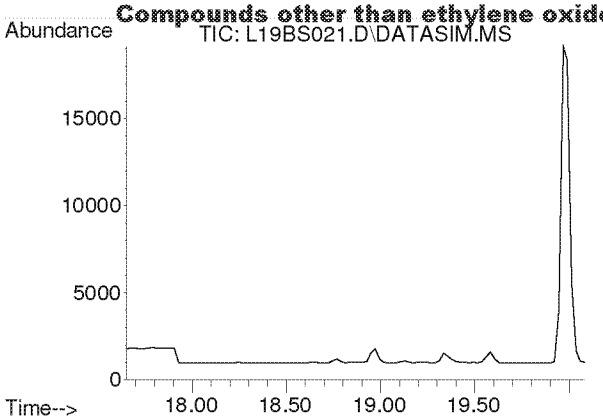
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
65	31.7



Compounds other than ethylene oxide were not quantitated.

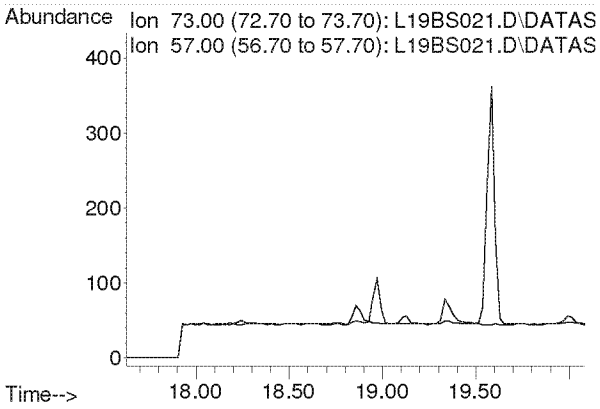


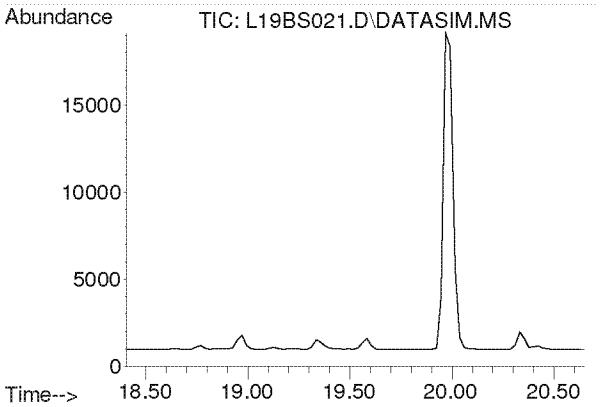
#22
Methyl tert-Butyl Ether
Concen: N.D.
Expected RT: 18.79 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
57	22.5



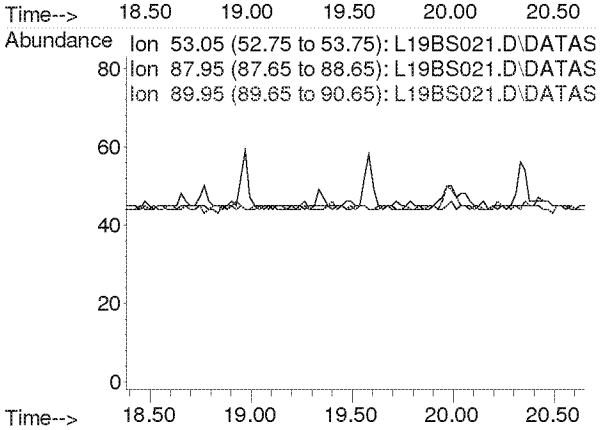


#23
Chloroprene
Concen: N.D.
Expected RT: 19.54 min

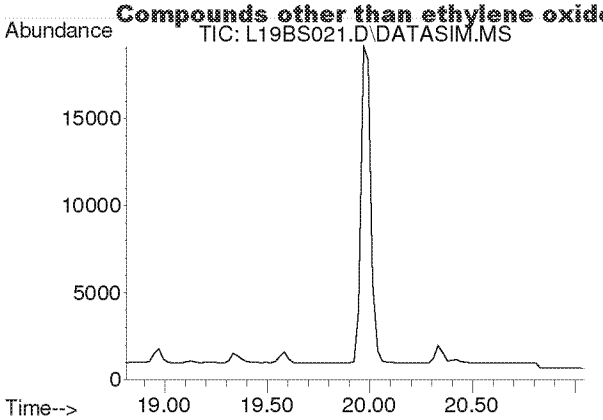
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	53.3
90	17.4



Compounds other than ethylene oxide were not quantitated.

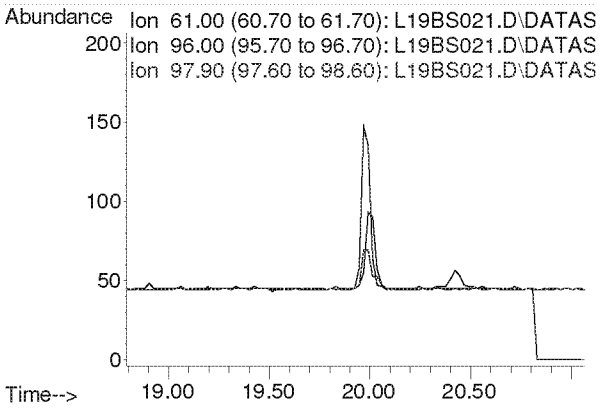


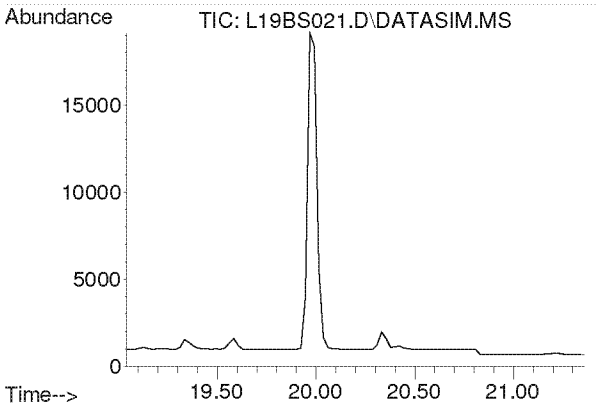
#24
cis-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 19.95 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	73.8
98	47.0



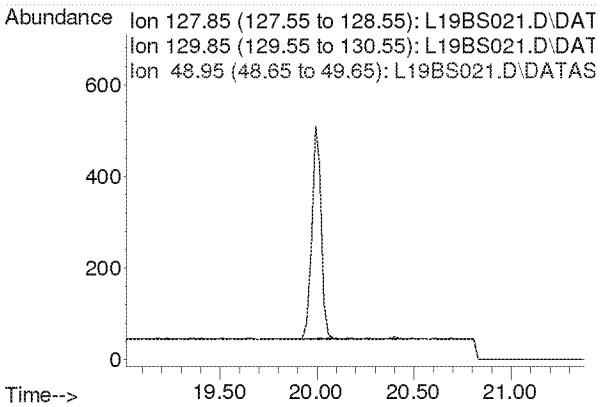


#25
Bromochloromethane
Concen: N.D.
Expected RT: 20.17 min

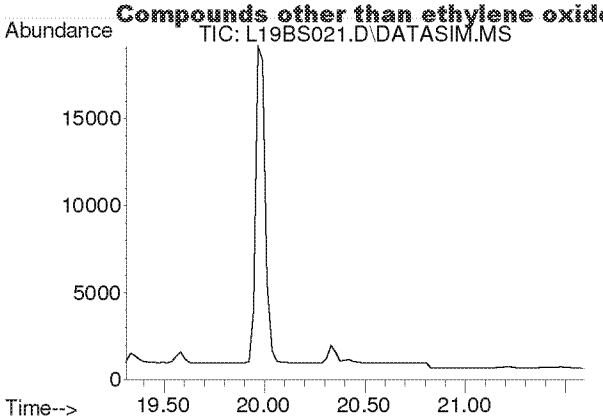
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 128

Sig	Exp Ratio
128	100
130	129.1
49	160.4



Compounds other than ethylene oxide were not quantitated.

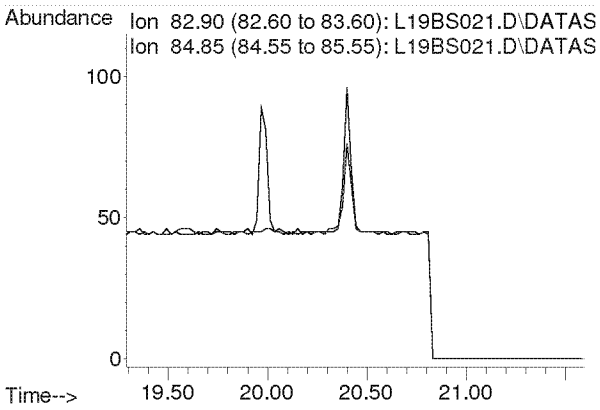


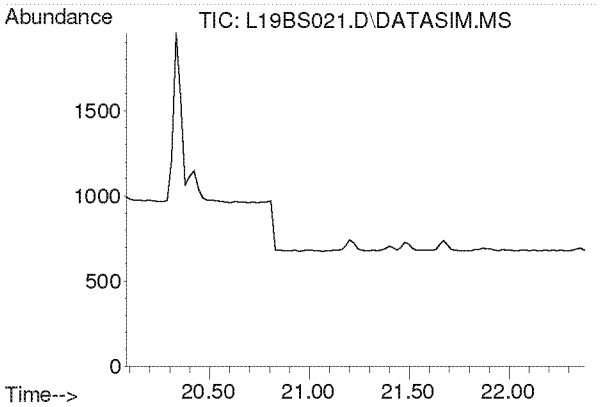
#26
Chloroform
Concen: N.D.
Expected RT: 20.40 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.4



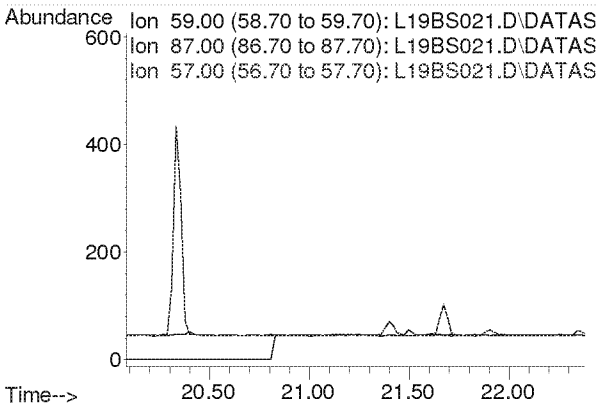


#27
Ethyl tert-Butyl Ether
Concen: N.D.
Expected RT: 21.18 min

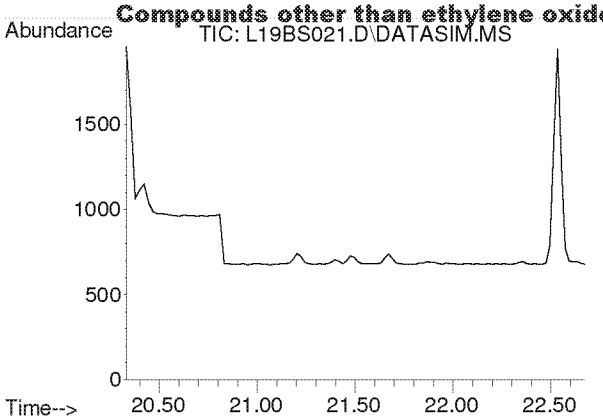
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 59

Sig	Exp Ratio
59	100
87	39.4
57	33.2



Compounds other than ethylene oxide were not quantitated.

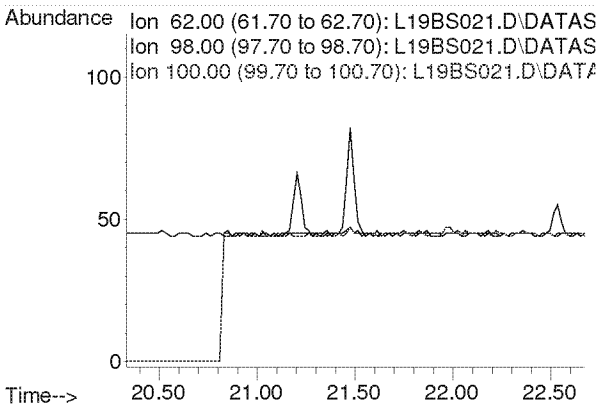


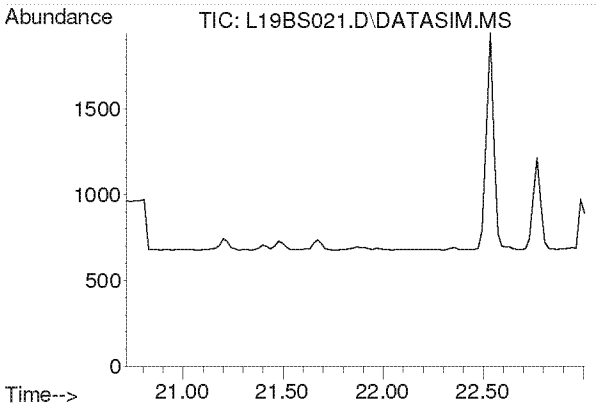
#28
1,2-Dichloroethane
Concen: N.D.
Expected RT: 21.48 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
98	6.3
100	4.0



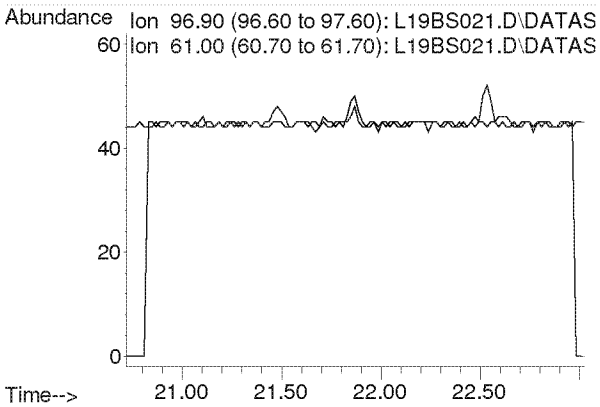


#30
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 21.87 min

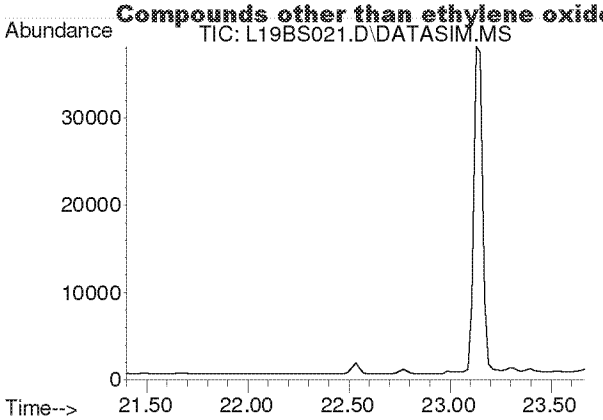
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
61	62.1



Compounds other than ethylene oxide were not quantitated.

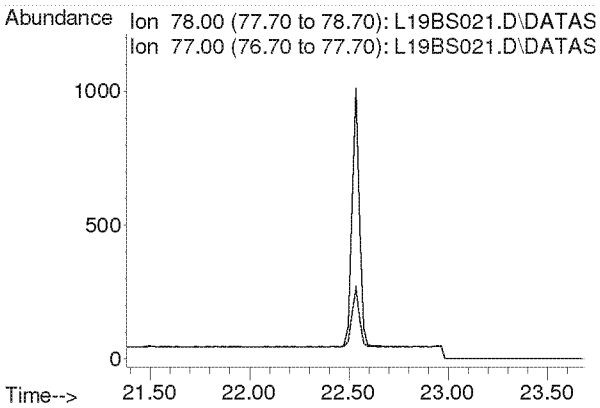


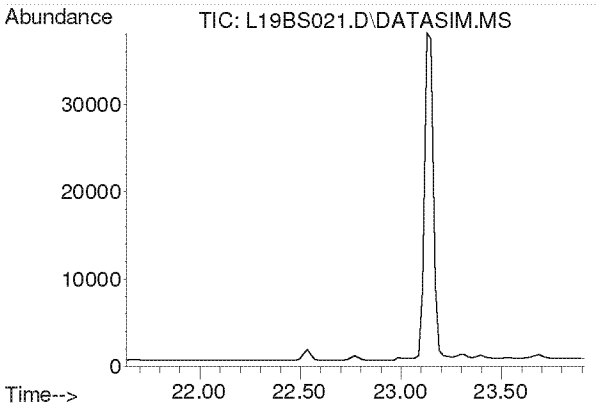
#31
Benzene
Concen: N.D.
Expected RT: 22.53 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 78

Sig	Exp Ratio
78	100
77	22.8



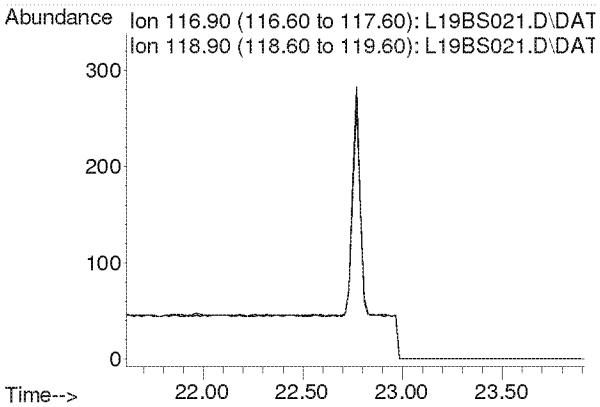


#32
Carbon Tetrachloride
Concen: N.D.
Expected RT: 22.77 min

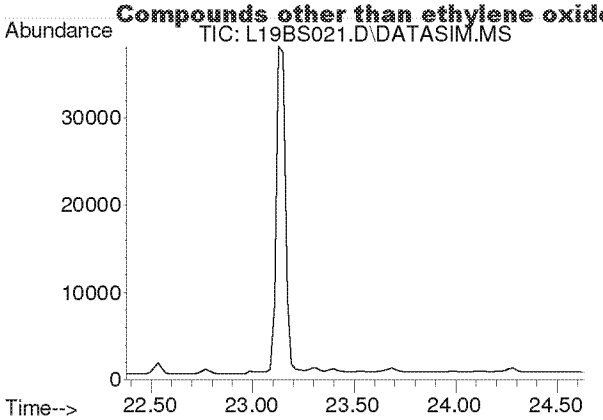
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 117

Sig	Exp Ratio
117	100
119	96.3



Compounds other than ethylene oxide were not quantitated.

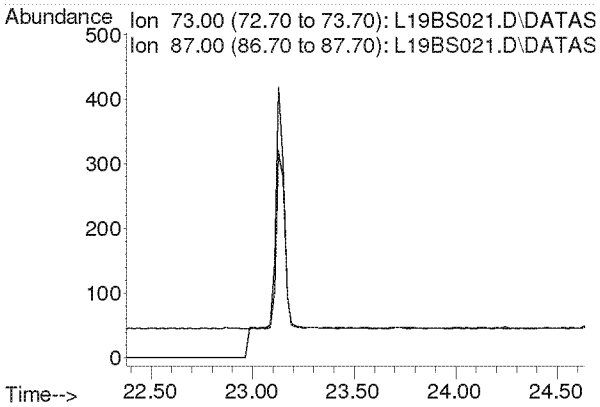


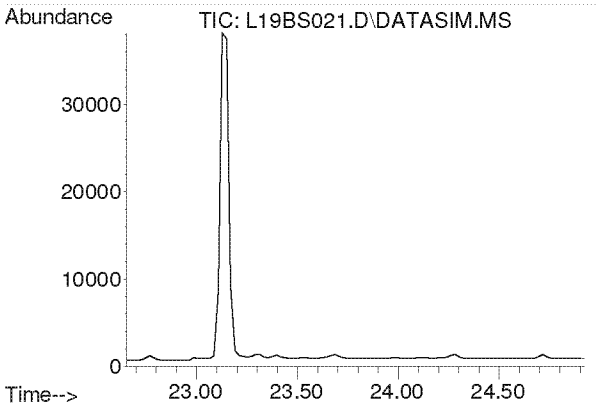
#33
tert-Amyl Methyl Ether
Concen: N.D.
Expected RT: 23.52 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
87	25.1



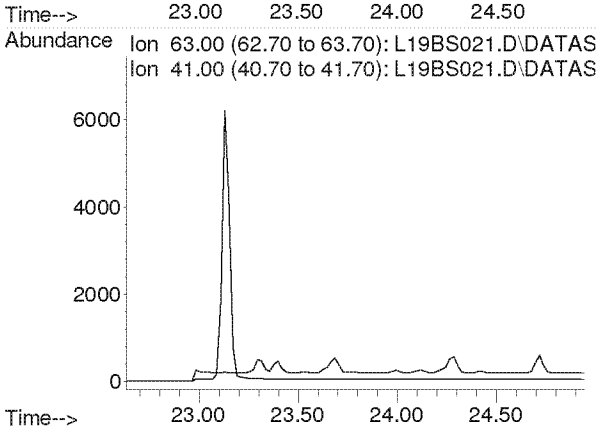


#34
1,2-Dichloropropane
Concen: N.D.
Expected RT: 23.79 min

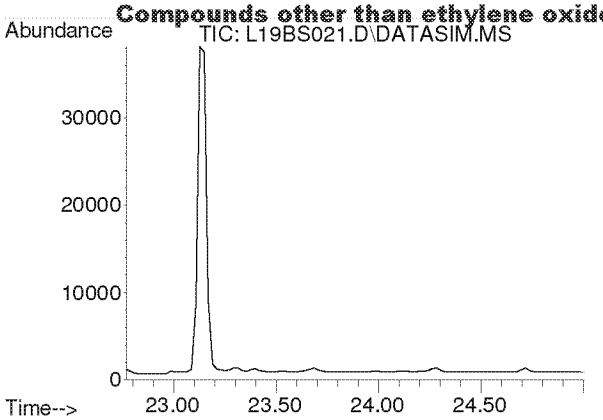
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	219.9



Compounds other than ethylene oxide were not quantitated.

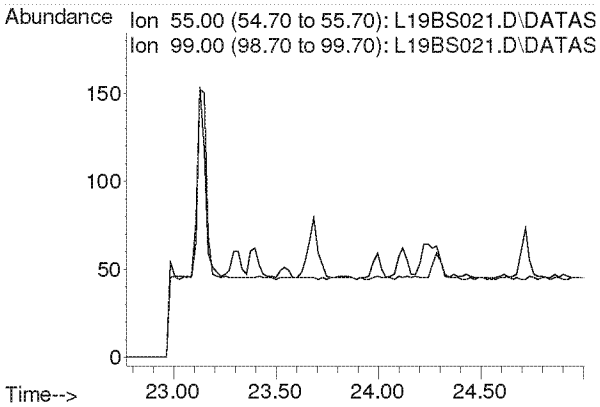


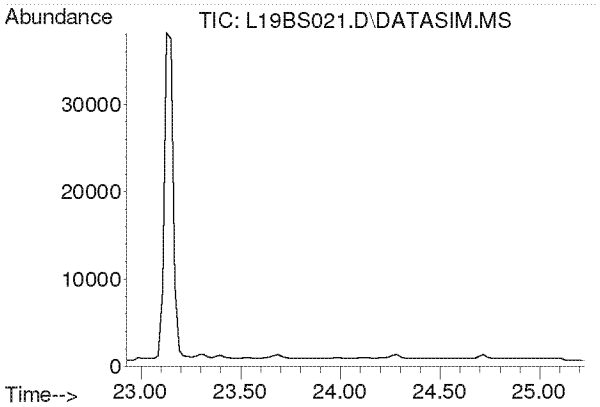
#35
Ethyl Acrylate
Concen: N.D.
Expected RT: 23.89 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
99	6.3



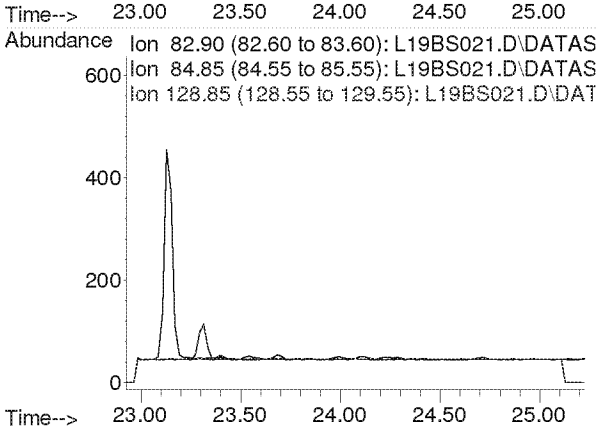


#36
Bromodichloromethane
Concen: N.D.
Expected RT: 24.08 min

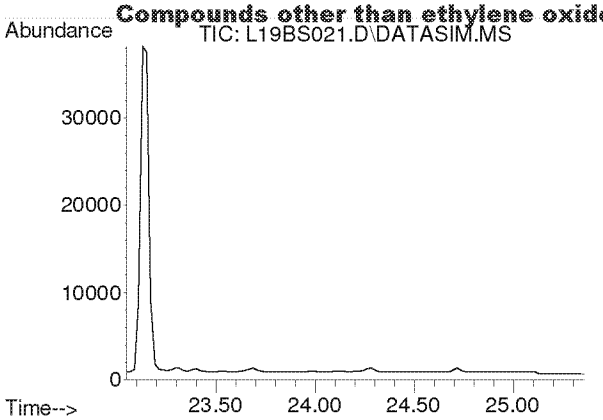
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.7
129	12.4



Compounds other than ethylene oxide were not quantitated.

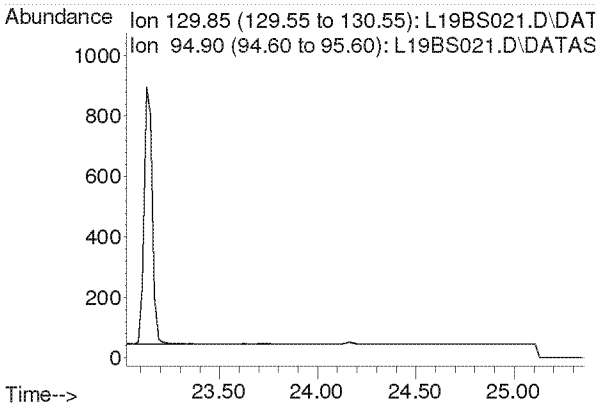


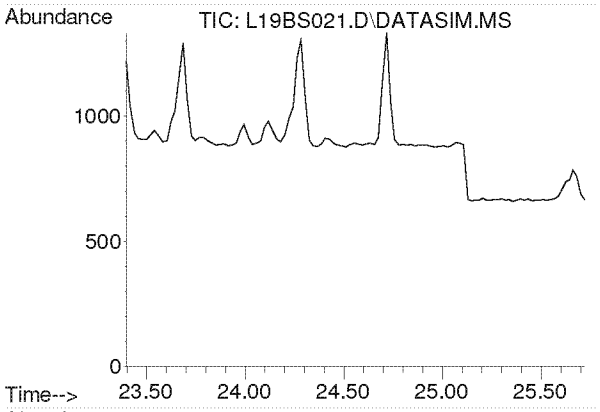
#37
Trichloroethylene
Concen: N.D.
Expected RT: 24.18 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 130

Sig	Exp Ratio
130	100
95	106.1



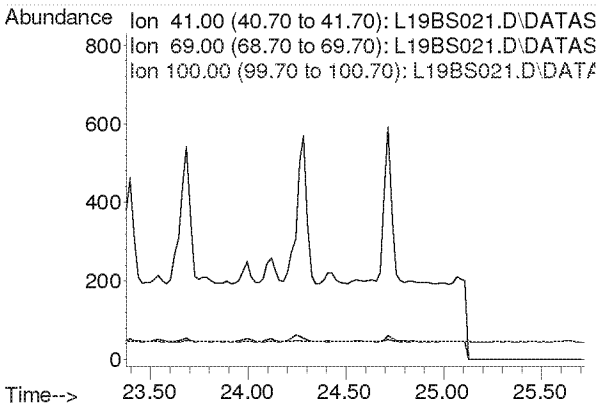


#38
Methyl Methacrylate
Concen: N.D.
Expected RT: 24.53 min

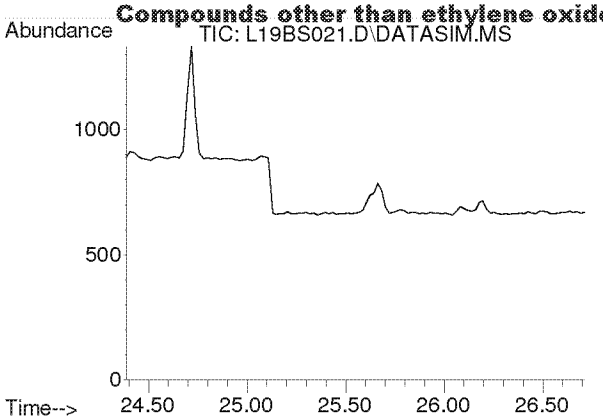
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
69	21.0
100	5.6



Compounds other than ethylene oxide were not quantitated.

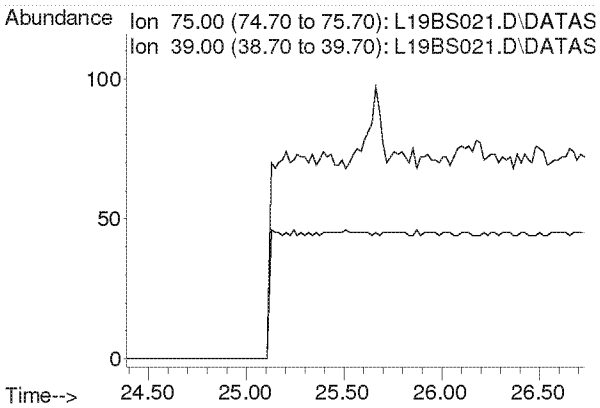


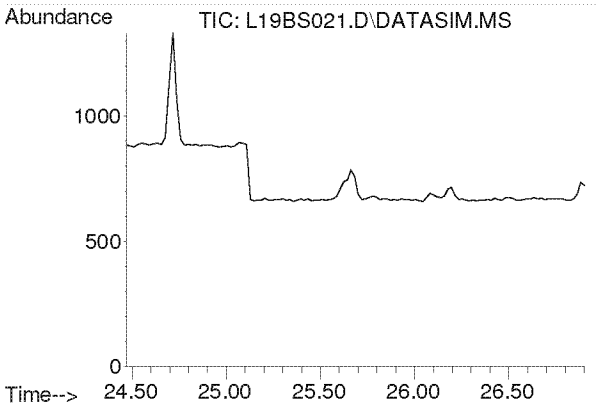
#39
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 25.53 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	54.2



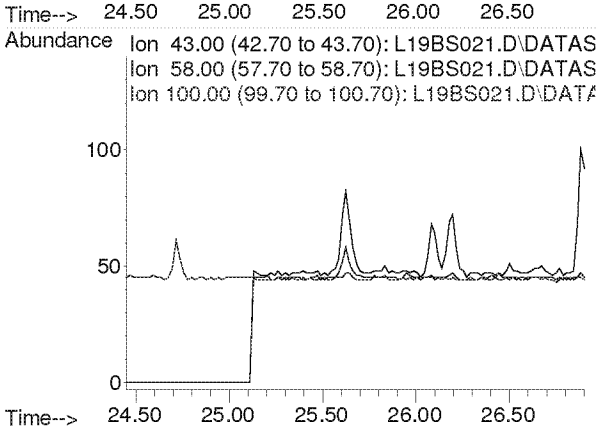


#40
Methyl Isobutyl Ketone
Concen: N.D.
Expected RT: 25.60 min

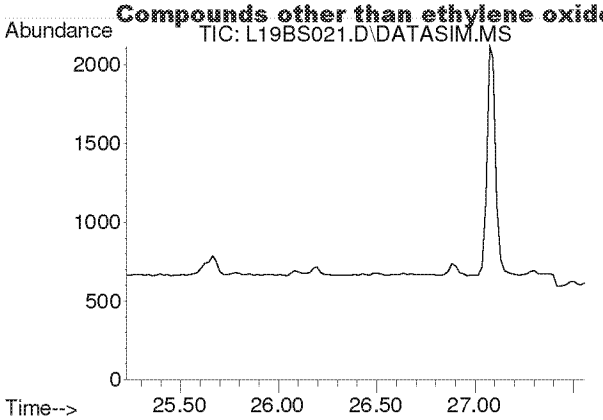
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	35.0
100	8.7



Compounds other than ethylene oxide were not quantitated.

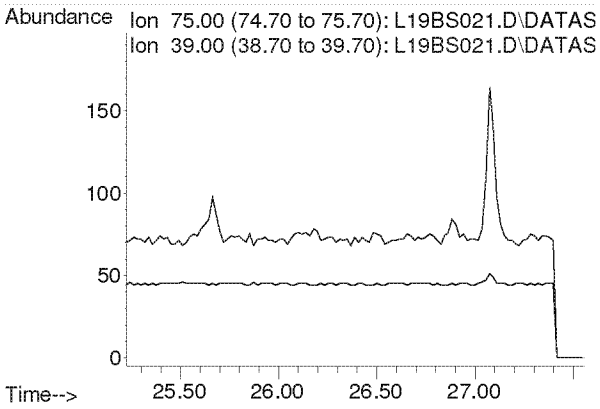


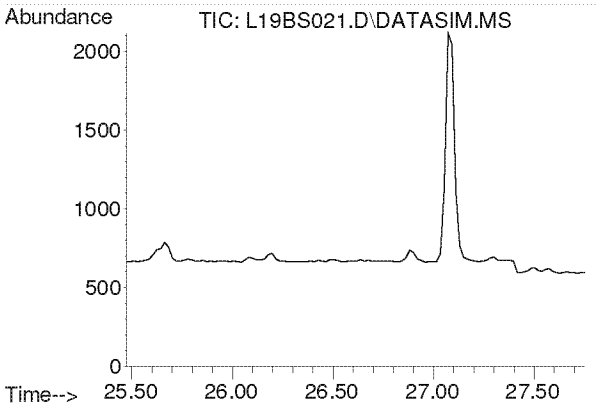
#41
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 26.37 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	53.6



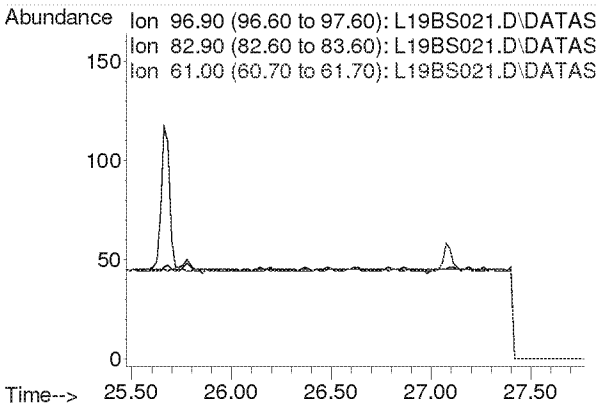


#42
1,1,2-Trichloroethane
Concen: N.D.
Expected RT: 26.62 min

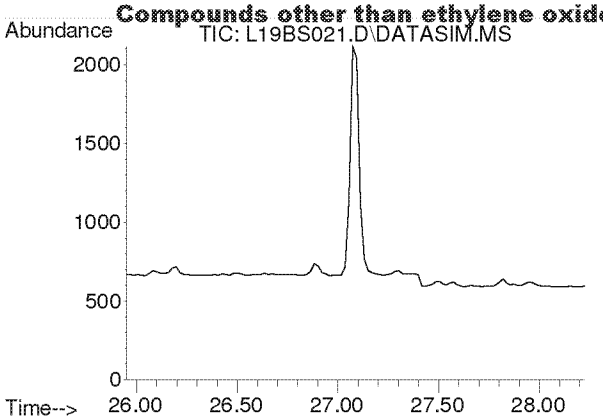
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
83	94.2
61	62.2



Compounds other than ethylene oxide were not quantitated.

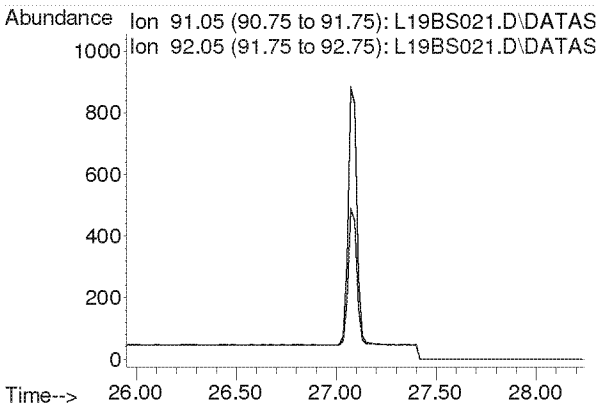


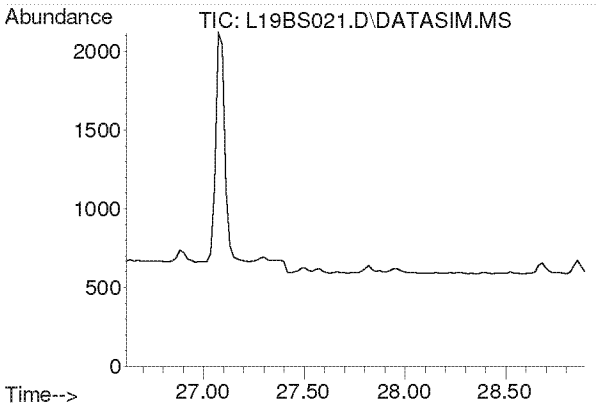
#44
Toluene
Concen: N.D.
Expected RT: 27.09 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	52.5



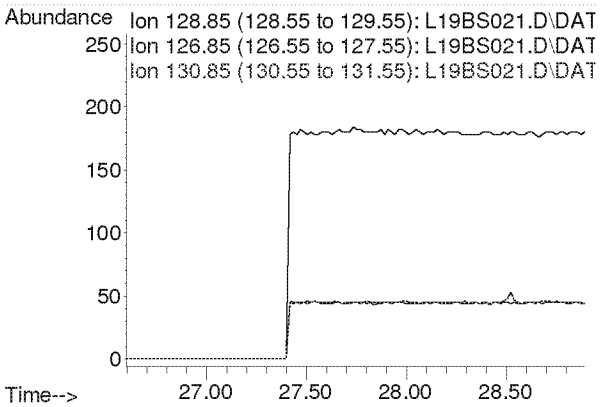


#45
Dibromochloromethane
Concen: N.D.
Expected RT: 27.75 min

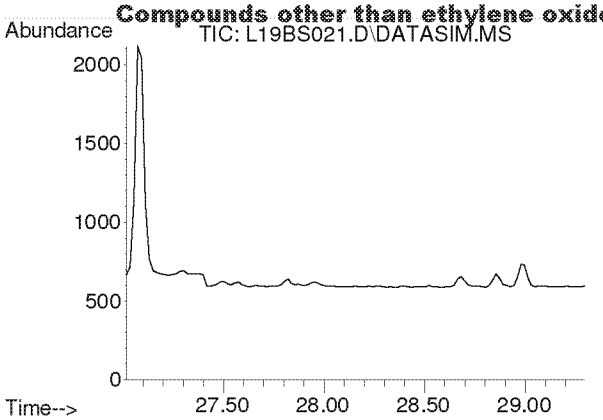
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 129

Sig	Exp Ratio
129	100
127	19.3
131	6.0



Compounds other than ethylene oxide were not quantitated.

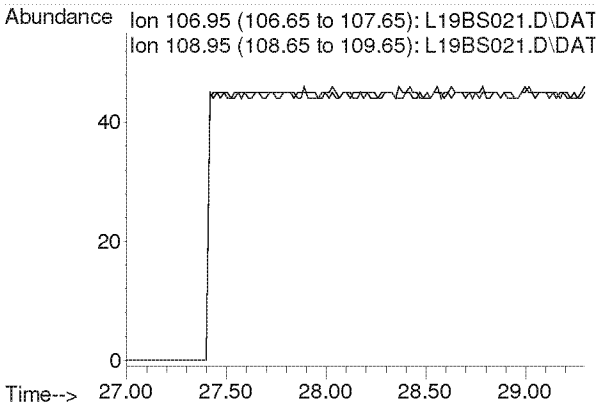


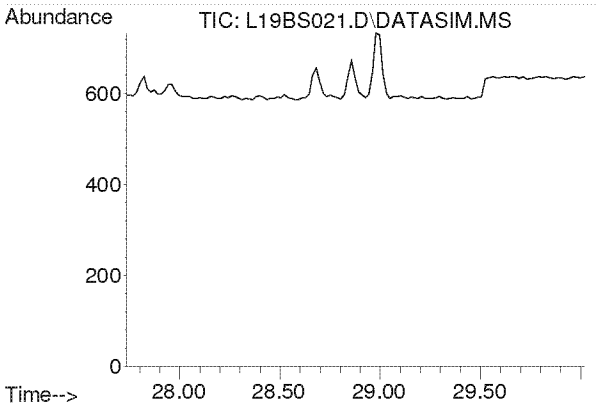
#46
1,2-Dibromoethane
Concen: N.D.
Expected RT: 28.15 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 107

Sig	Exp Ratio
107	100
109	94.2



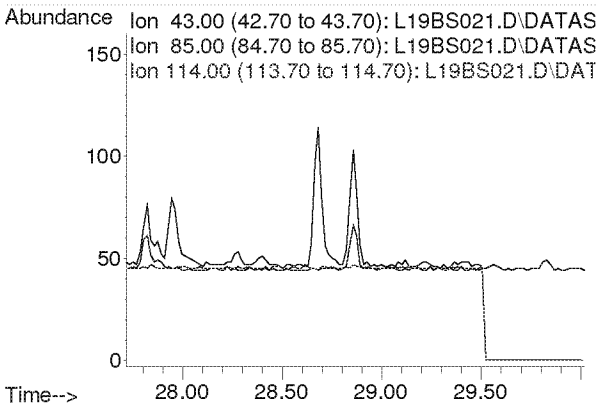


#47
n-Octane
Concen: N.D.
Expected RT: 28.87 min

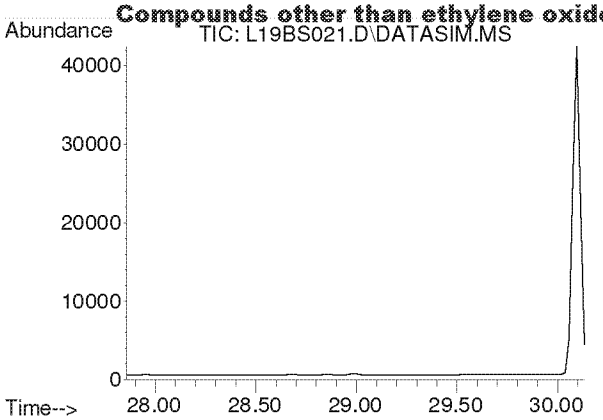
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
85	41.3
114	2.8



Compounds other than ethylene oxide were not quantitated.

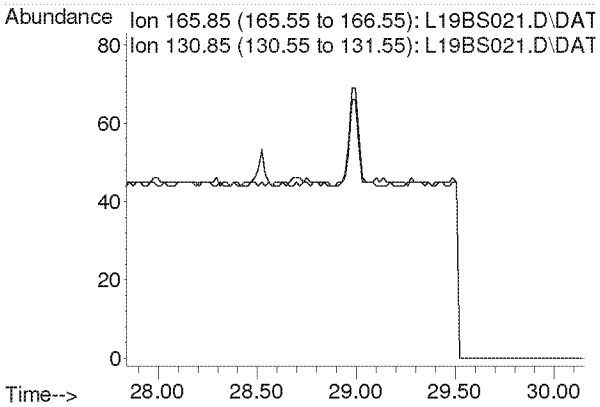


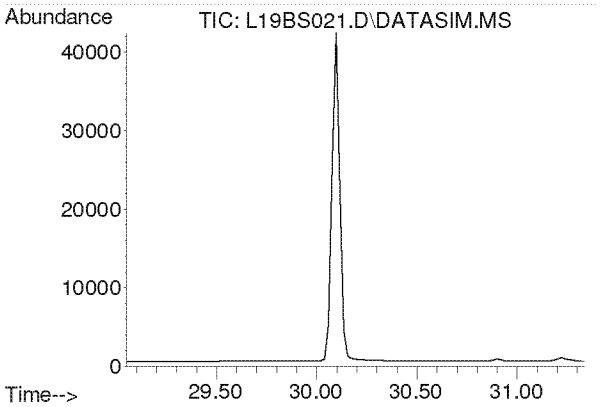
#48
Tetrachloroethylene
Concen: N.D.
Expected RT: 29.00 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 166

Sig	Exp Ratio
166	100
131	76.9



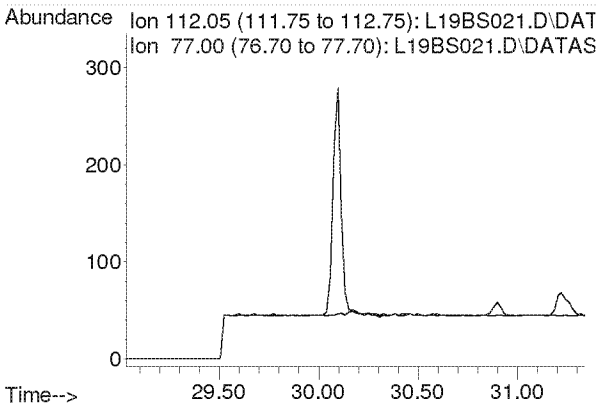


#49
Chlorobenzene
Concen: N.D.
Expected RT: 30.19 min

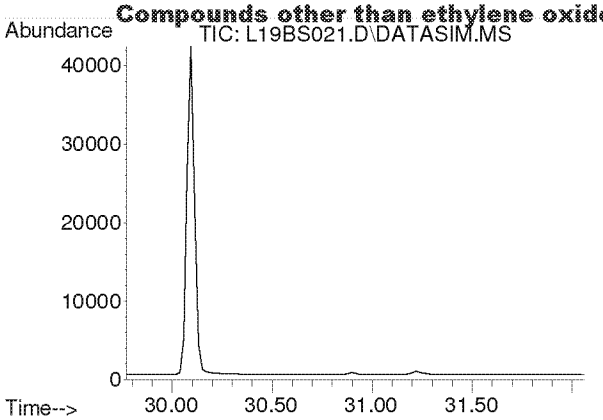
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 112

Sig	Exp Ratio
112	100
77	59.7



Compounds other than ethylene oxide were not quantitated.

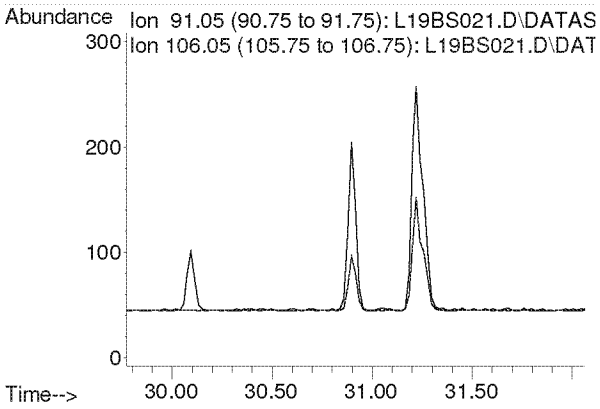


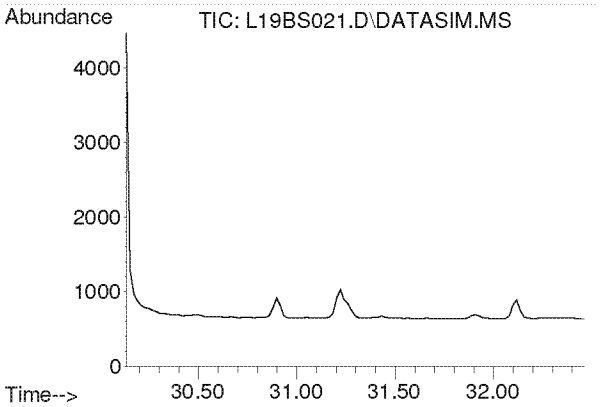
#50
Ethylbenzene
Concen: N.D.
Expected RT: 30.92 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	32.5



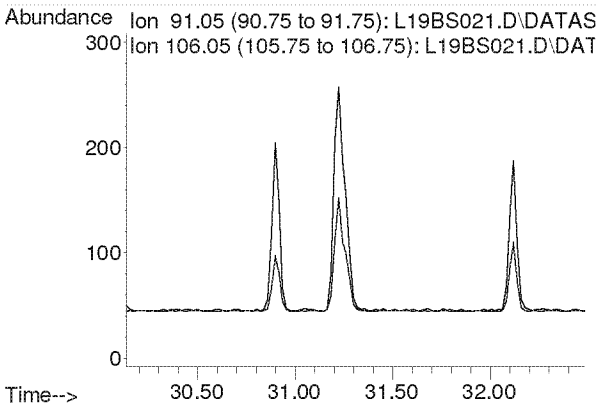


#51
m,p-Xylene
Concen: N.D.
Expected RT: 31.28 min

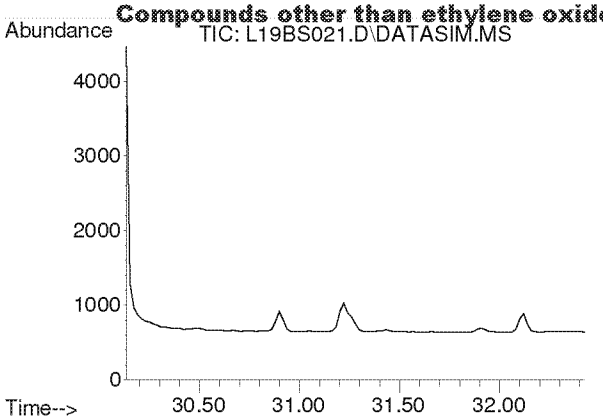
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	46.6



Compounds other than ethylene oxide were not quantitated.

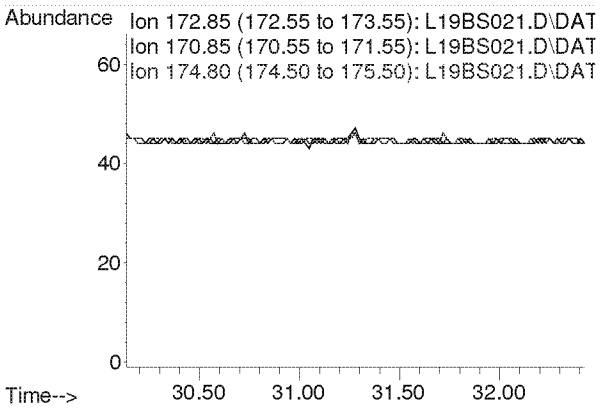


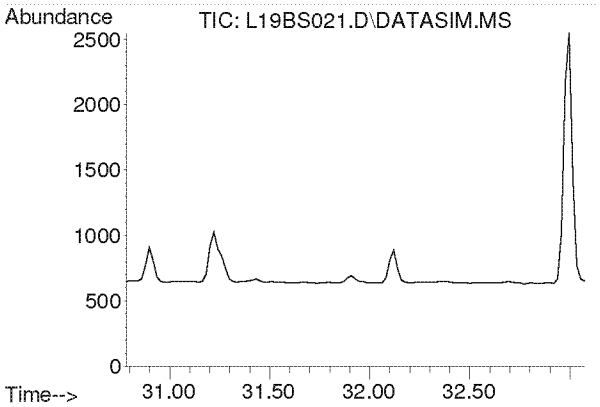
#52
Bromoform
Concen: N.D.
Expected RT: 31.28 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 173

Sig	Exp Ratio
173	100
171	51.3
175	48.9



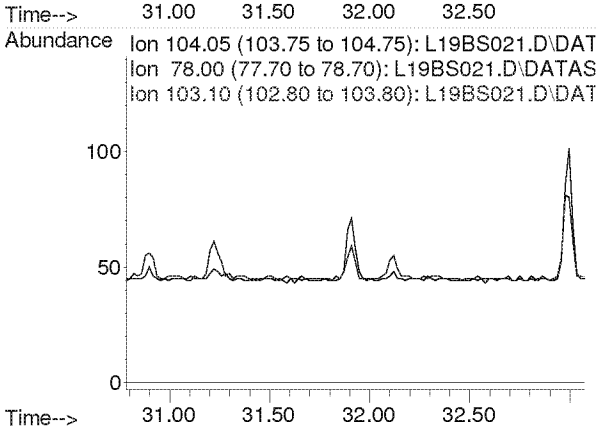


#53
Styrene
Concen: N.D.
Expected RT: 31.93 min

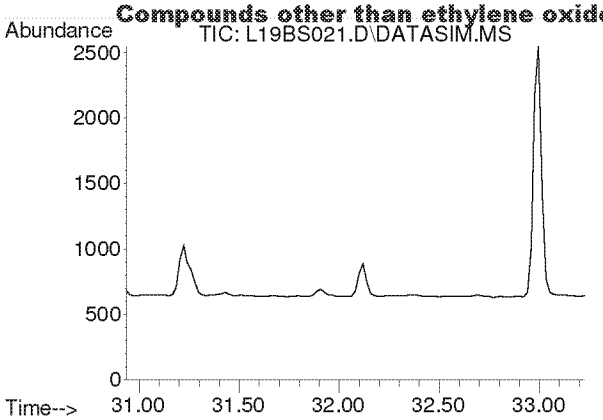
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 104

Sig	Exp Ratio
104	100
78	44.3
103	0.0



Compounds other than ethylene oxide were not quantitated.

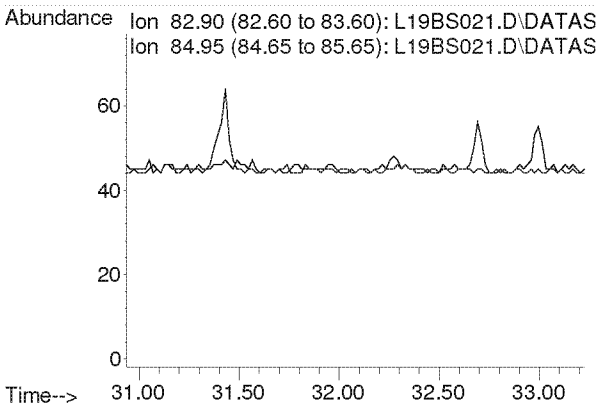


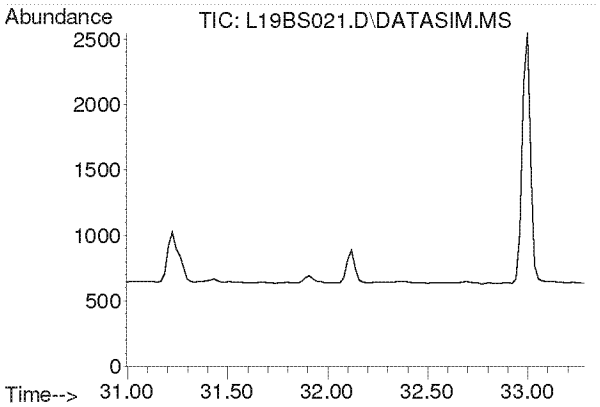
#54
1,1,2,2-Tetrachloroethane
Concen: N.D.
Expected RT: 32.08 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.5



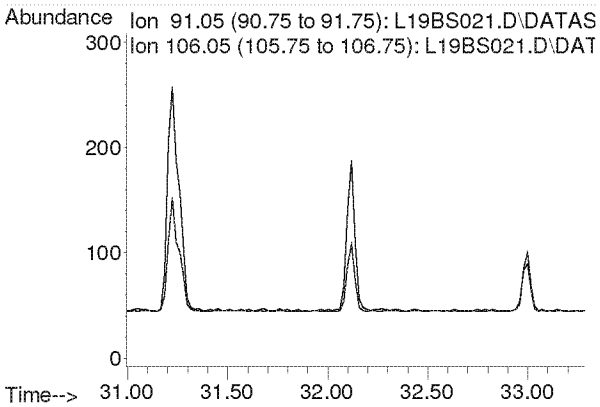


#55
o-Xylene
Concen: N.D.
Expected RT: 32.14 min

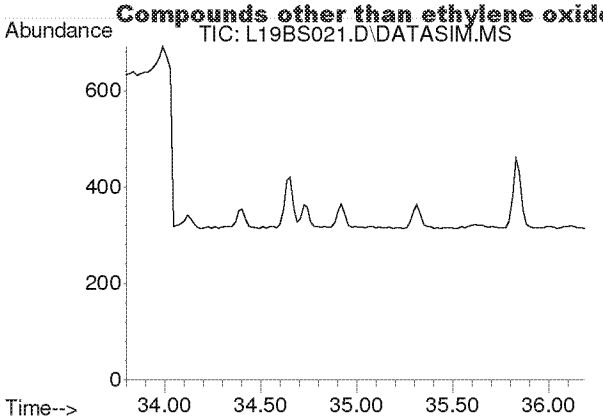
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	45.8



Compounds other than ethylene oxide were not quantitated.

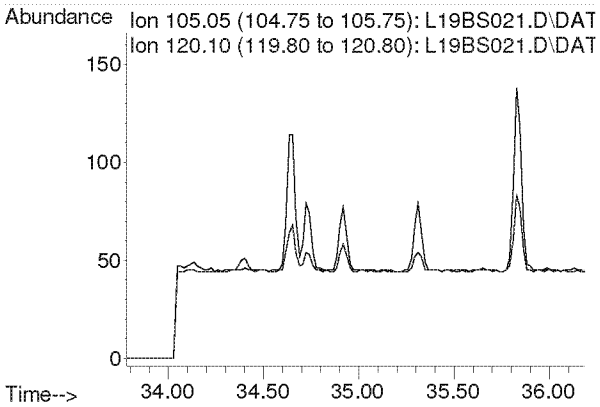


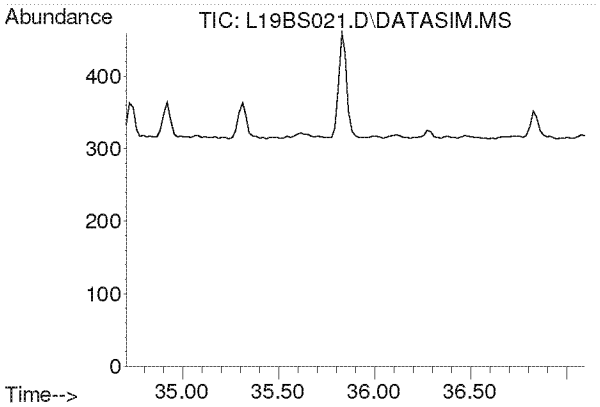
#56
1,3,5-Trimethylbenzene
Concen: N.D.
Expected RT: 34.94 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	46.0



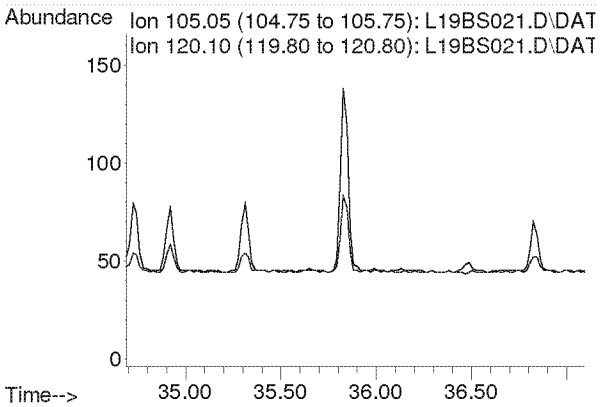


#57
1,2,4-Trimethylbenzene
Concen: N.D.
Expected RT: 35.85 min

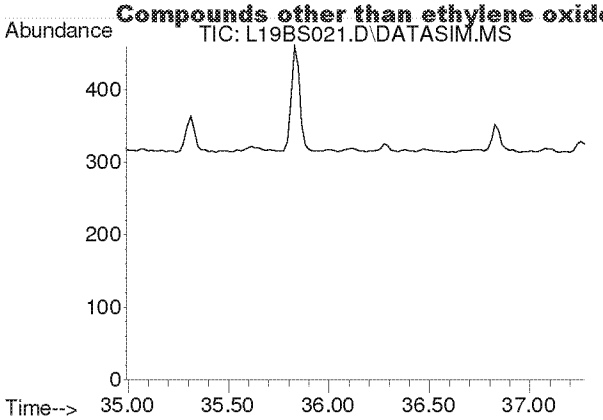
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	44.0



Compounds other than ethylene oxide were not quantitated.

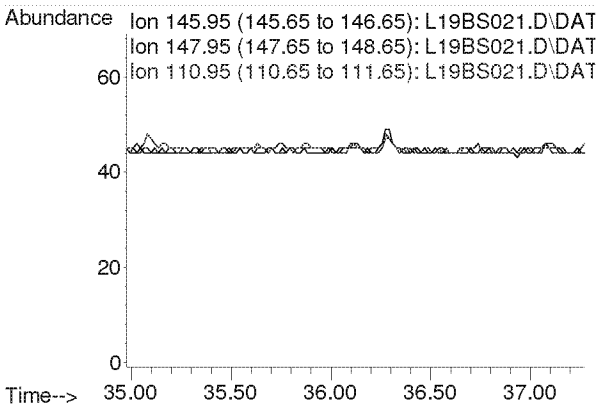


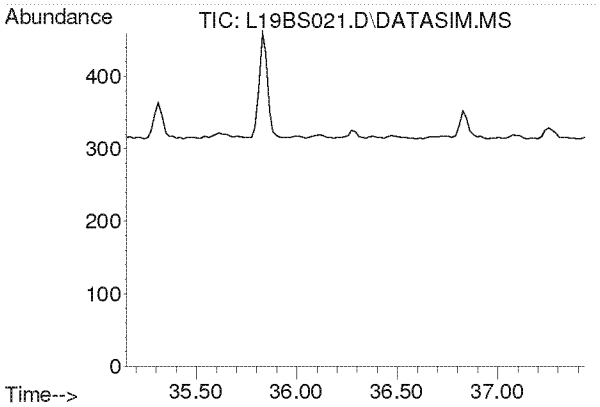
#58
m-Dichlorobenzene
Concen: N.D.
Expected RT: 36.13 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.1
111	40.1



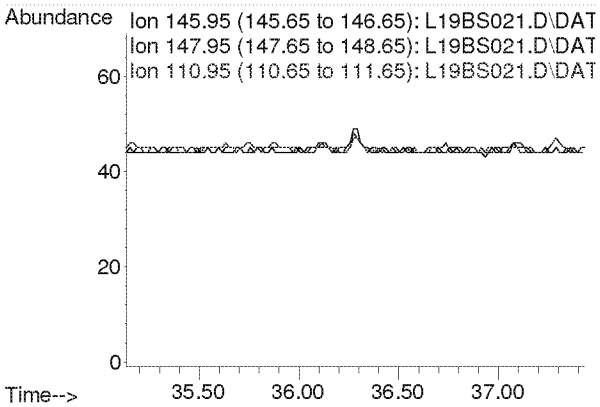


#59
p-Dichlorobenzene
Concen: N.D.
Expected RT: 36.29 min

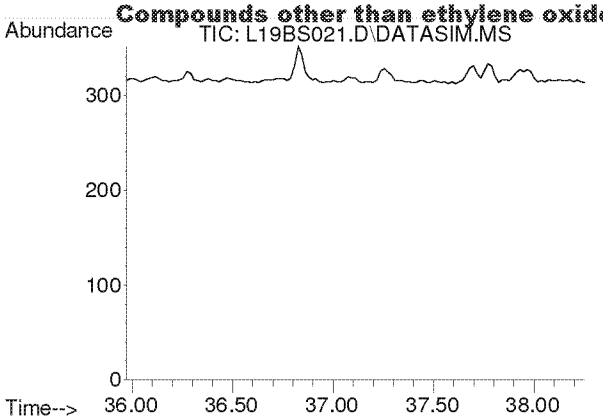
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.3
111	38.7



Compounds other than ethylene oxide were not quantitated.

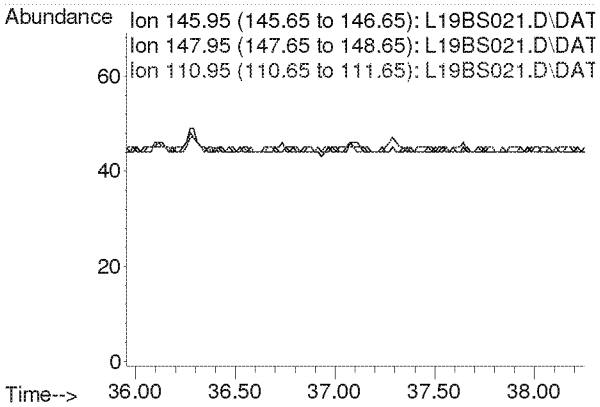


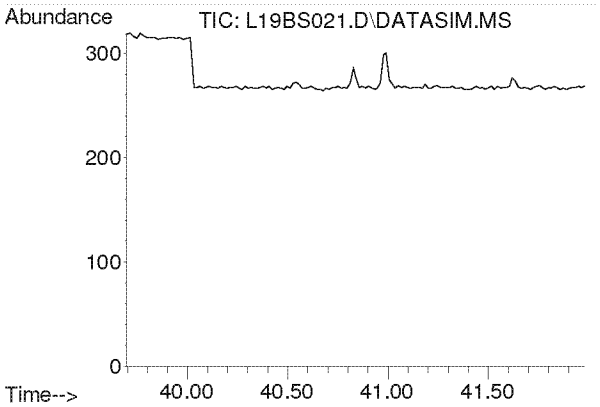
#60
o-Dichlorobenzene
Concen: N.D.
Expected RT: 37.11 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.8



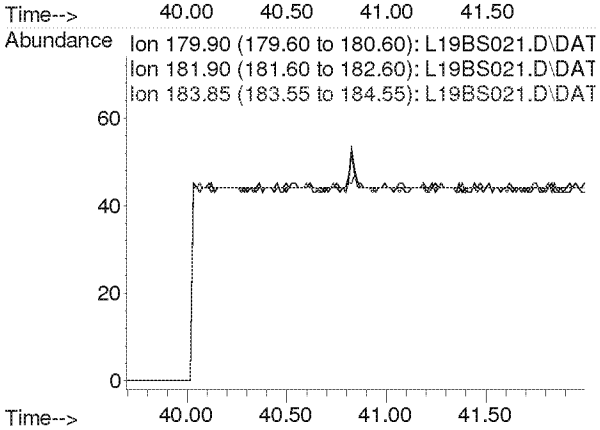


#61
1,2,4-Trichlorobenzene
Concen: N.D.
Expected RT: 40.84 min

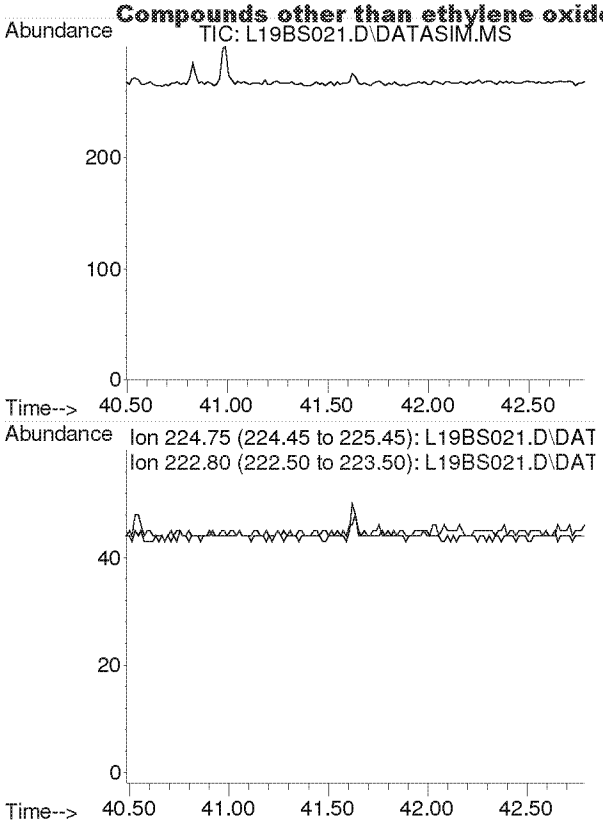
Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 180

Sig	Exp Ratio
180	100
182	94.6
184	30.2



Compounds other than ethylene oxide were not quantitated.



#62
Hexachloro-1,3-butadiene
Concen: N.D.
Expected RT: 41.63 min

Lab File: L19BS021.D
Acq: 20 Feb 2019 6:59 am

Tgt Ion: 225

Sig	Exp Ratio
225	100
223	62.4

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS022.D
Acq On : 20 Feb 2019 7:59 am (#1); 20-Feb-19, 07:54:13 (#2)
Operator : MAH
Sample : 9021401-07
Misc : WEST NEIGHBORHOOD 2/11/19 (Sig #1); (Sig #2)
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 20 14:47:48 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) IS-Hexane-d14	19.968	66	42159	4.7700 ppbv	-0.02
29) IS-1,4-Difluorobenzene	23.128	114	105412	4.9900 ppbv	-0.02
43) IS-Chlorobenzene-d5	30.096	117	74529	4.7400 ppbv	-0.02

System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D.	d
3) Propylene	0.000	41	0	N.D.	d
4) Dichlorodifluoromethane	0.000	85	0	N.D.	d
5) Chloromethane	0.000	50	0	N.D.	d
6) Dichlorotetrafluoroethane	0.000	85	0	N.D.	d
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D.	d
9) Ethylene oxide	12.408	29	1756m	0.7282 ppbv	
10) Bromomethane	0.000	94	0	N.D.	d
11) Chloroethane	0.000	64	0	N.D.	
12) Acetonitrile	0.000	41	0	N.D.	d
13) Acrolein	0.000	56	0	N.D.	d
14) Trichlorofluoromethane	0.000	101	0	N.D.	d
15) Acrylonitrile	0.000	53	0	N.D.	
16) 1,1-Dichloroethene	0.000	61	0	N.D.	
17) Methylene Chloride	0.000	49	0	N.D.	d
18) Carbon Disulfide	0.000	76	0	N.D.	d
19) Trichlorotrifluoroethane	0.000	101	0	N.D.	d
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) 1,1-Dichloroethane	0.000	63	0	N.D.	
22) Methyl tert-Butyl Ether	0.000	73	0	N.D.	d
23) Chloroprene	0.000	53	0	N.D.	
24) cis-1,2-Dichloroethylene	0.000	61	0	N.D.	
25) Bromochloromethane	0.000	128	0	N.D.	
26) Chloroform	0.000	83	0	N.D.	d
27) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
28) 1,2-Dichloroethane	0.000	62	0	N.D.	d
30) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
31) Benzene	0.000	78	0	N.D.	d
32) Carbon Tetrachloride	0.000	117	0	N.D.	d
33) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) 1,2-Dichloropropane	0.000	63	0	N.D.	
35) Ethyl Acrylate	0.000	55	0	N.D.	
36) Bromodichloromethane	0.000	83	0	N.D.	
37) Trichloroethylene	0.000	130	0	N.D.	
38) Methyl Methacrylate	0.000	41	0	N.D.	d
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	0.000	43	0	N.D.	d
41) trans-1,3-Dichloropropene	0.000	75	0	N.D.	
42) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
44) Toluene	0.000	91	0	N.D.	d
45) Dibromochloromethane	0.000	129	0	N.D.	
46) 1,2-Dibromoethane	0.000	107	0	N.D.	
47) n-Octane	0.000	43	0	N.D.	d
48) Tetrachloroethylene	0.000	166	0	N.D.	d
49) Chlorobenzene	0.000	112	0	N.D.	
50) Ethylbenzene	0.000	91	0	N.D.	d

Compounds other than ethylene oxide were not quantitated

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS022.D
Acq On : 20 Feb 2019 7:59 am (#1); 20-Feb-19, 07:54:13 (#2)
Operator : MAH
Sample : 9021401-07
Misc : WEST NEIGHBORHOOD 2/11/19 (Sig #1); (Sig #2)
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 20 14:47:48 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	0.000	91	0	N.D. d	
52) Bromoform	0.000	173	0	N.D.	
53) Styrene	0.000	104	0	N.D. d	
54) 1,1,2,2-Tetrachloroethane	0.000	83	0	N.D.	
55) o-Xylene	0.000	91	0	N.D. d	
56) 1,3,5-Trimethylbenzene	0.000	105	0	N.D. d	
57) 1,2,4-Trimethylbenzene	0.000	105	0	N.D. d	
58) m-Dichlorobenzene	0.000	146	0	N.D.	
59) p-Dichlorobenzene	0.000	146	0	N.D.	
60) o-Dichlorobenzene	0.000	146	0	N.D.	
61) 1,2,4-Trichlorobenzene	0.000	180	0	N.D.	
62) Hexachloro-1,3-butadiene	0.000	225	0	N.D.	

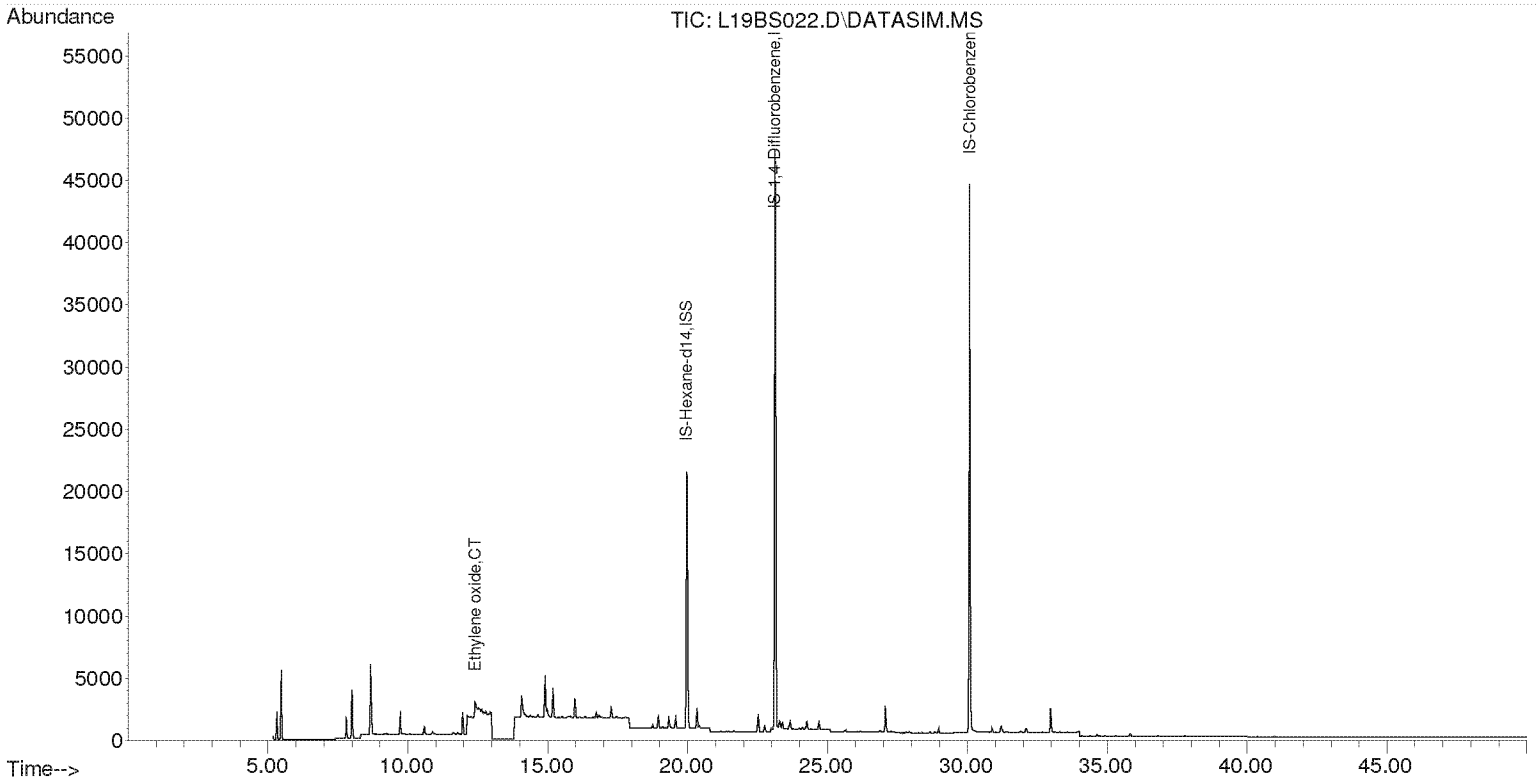
(#) = qualifier out of range (m) = manual integration (+) = signals summed

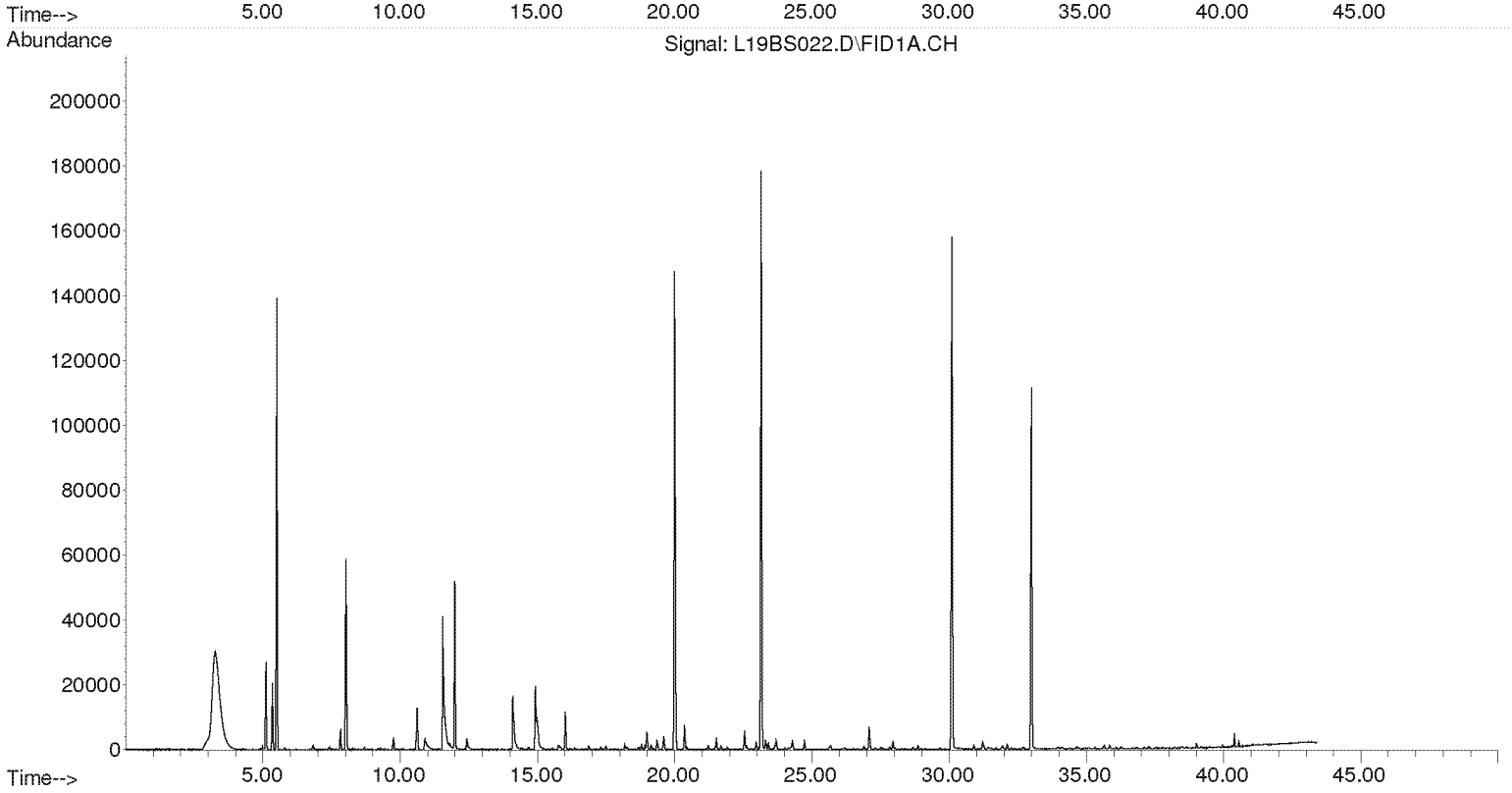
ED_002475_00000244-00149

Compounds other than ethylene oxide were not quantitated.

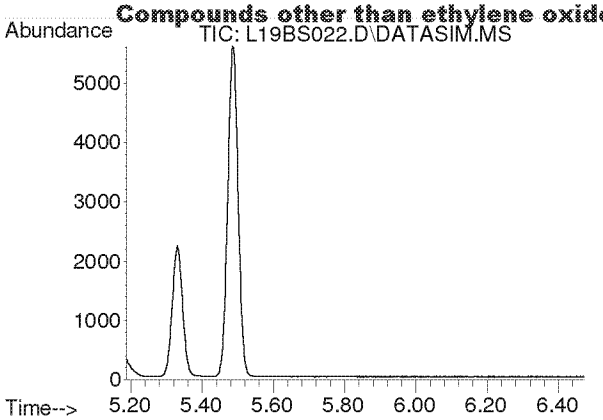
Data Path : Y:\MASS SPEC 1 DATA\L19BS\
Data File : L19BS022.D
Acq On : 20 Feb 2019 7:59 am (#1); 20 Feb 2019 7:54 am (#2)
Operator : MAH
Sample : 9021401-07
Misc : WEST NEIGHBORHOOD 2/11/19 (Sig #1); (Sig #2)
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Feb 20 13:54:53 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration





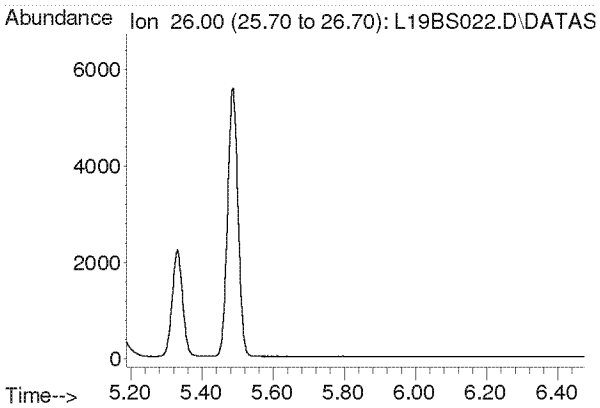
Compounds other than ethylene oxide were not quantitated.

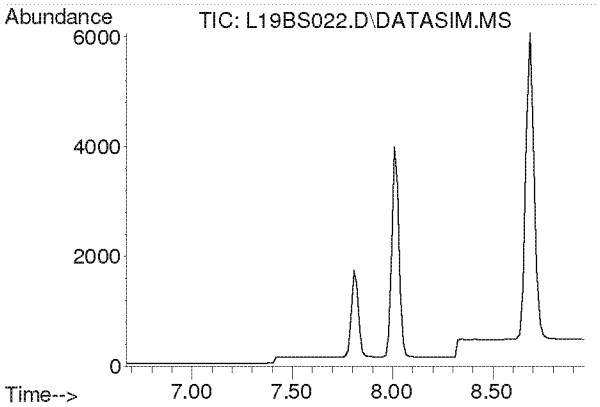


#2
Acetylene
Concen: N.D.
Expected RT: 5.40 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 26



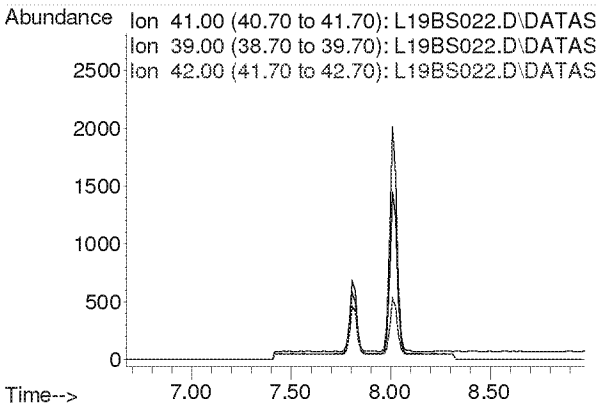


#3
Propylene
Concen: N.D.
Expected RT: 7.82 min

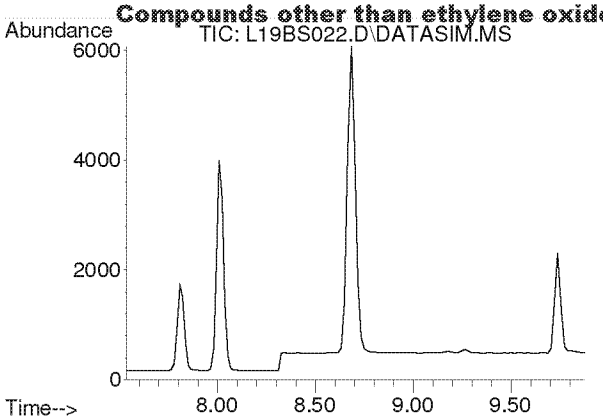
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
39	80.2
42	65.8



Compounds other than ethylene oxide were not quantitated.

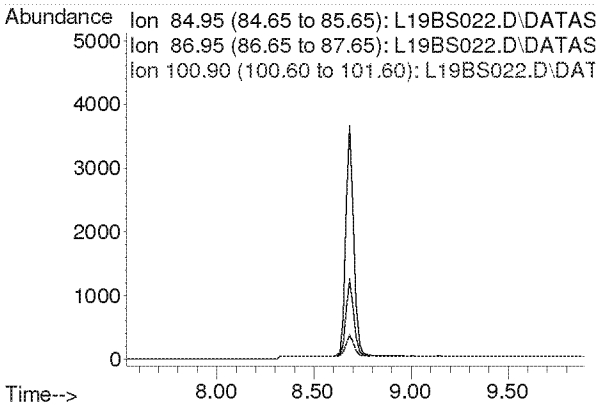


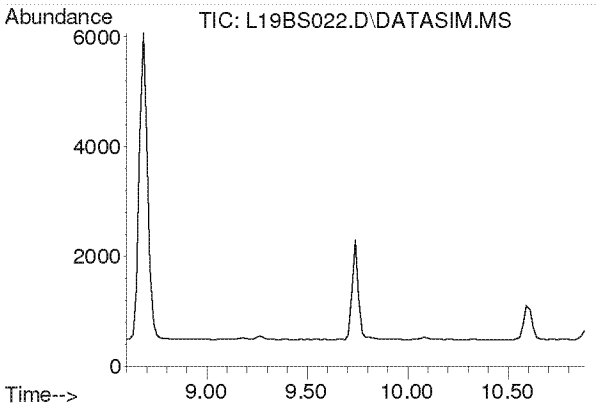
#4
Dichlorodifluoromethane
Concen: N.D.
Expected RT: 8.69 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
87	32.5
101	9.1



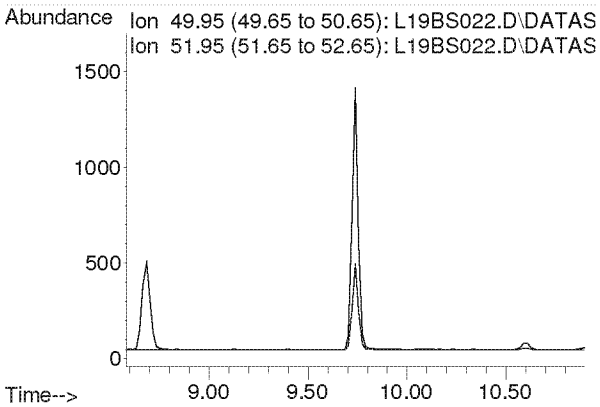


#5
Chloromethane
Concen: N.D.
Expected RT: 9.74 min

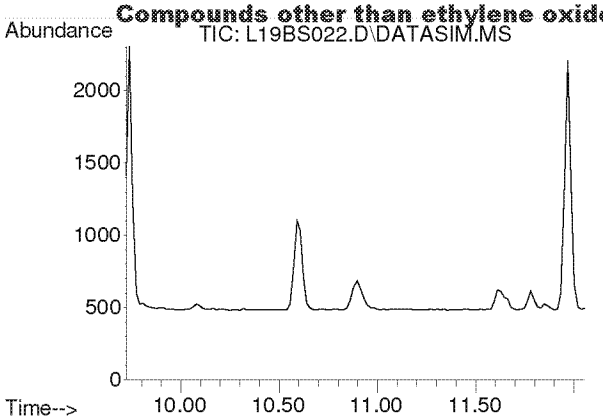
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 50

Sig	Exp Ratio
50	100
52	32.6



Compounds other than ethylene oxide were not quantitated.

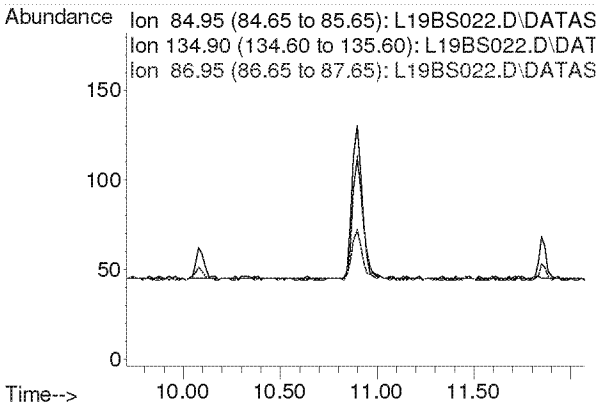


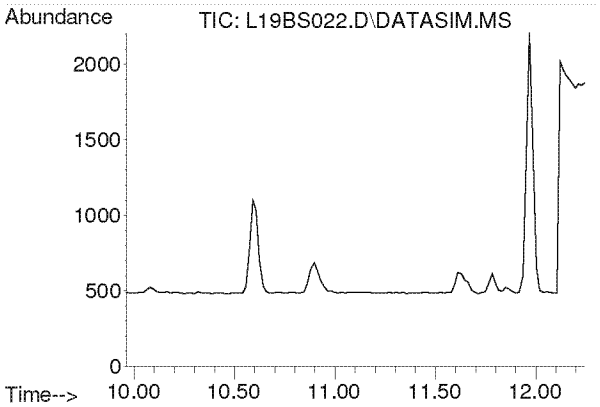
#6
Dichlorotetrafluoroethane
Concen: N.D.
Expected RT: 10.86 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
135	79.0
87	32.4



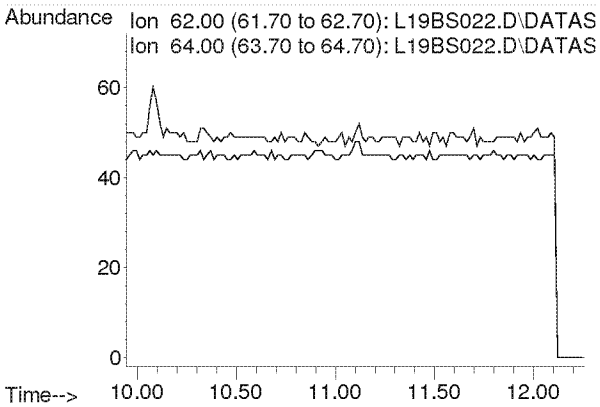


#7
Vinyl Chloride
Concen: N.D.
Expected RT: 11.10 min

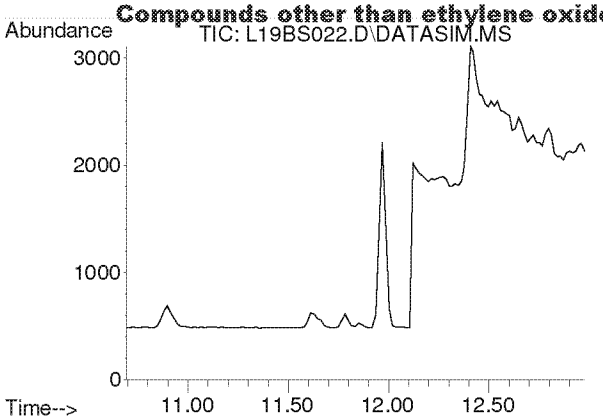
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	31.7



Compounds other than ethylene oxide were not quantitated.

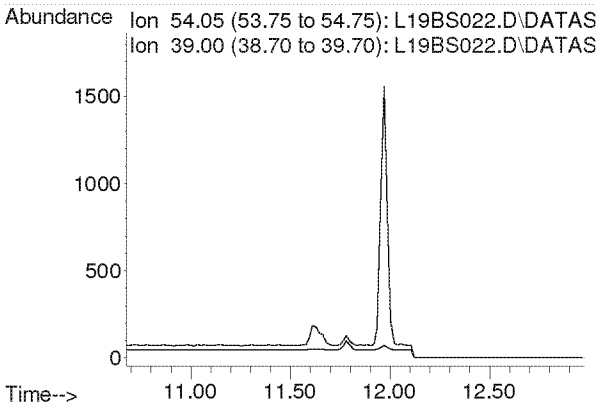


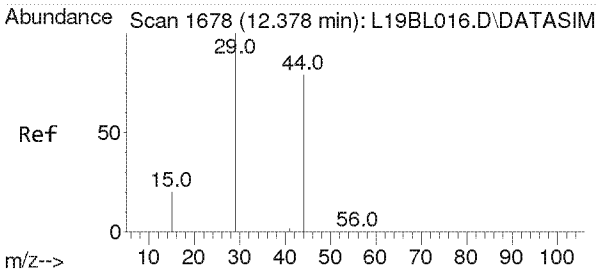
#8
1,3-Butadiene
Concen: N.D.
Expected RT: 11.78 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 54

Sig	Exp Ratio
54	100
39	102.0

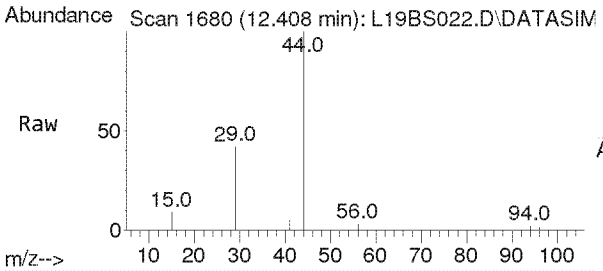


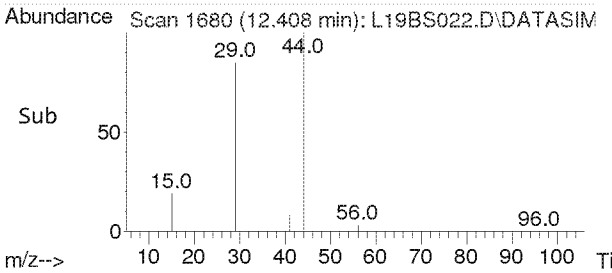


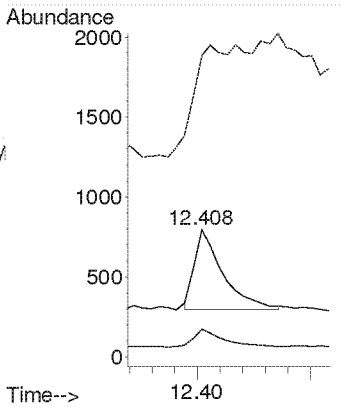
#9
Ethylene oxide
Concen: 0.728 ppbv m
RT: 12.408 min Scan# 1680
Delta R.T. 0.030 min
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 29 Resp: 1756

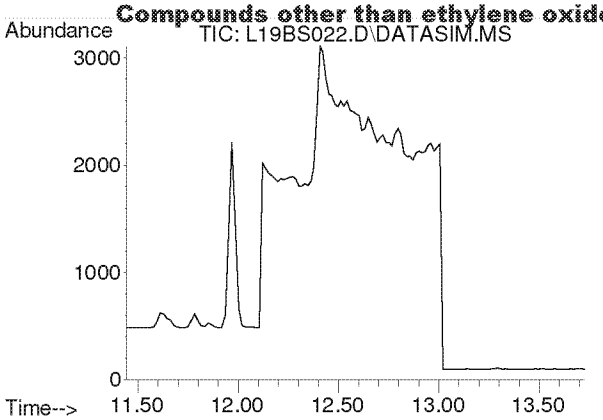
Ion	Ratio	Lower	Upper
29	100		
15	22.5	16.0	24.0
44	0.0	65.4	98.2#







Compounds other than ethylene oxide were not quantitated.

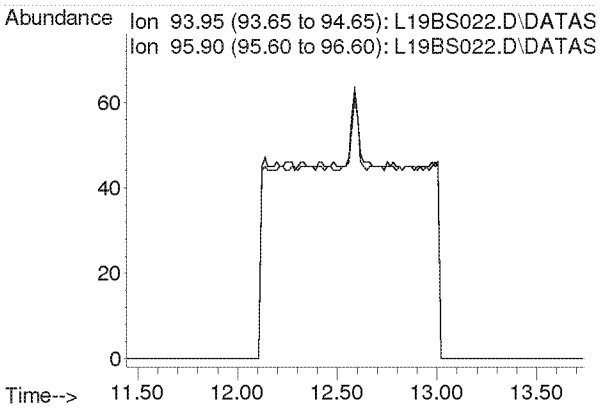


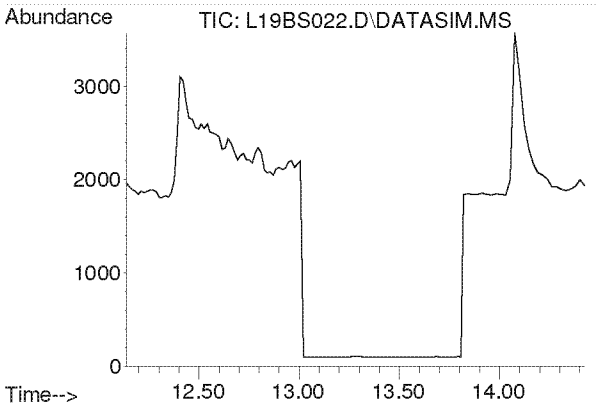
#10
Bromomethane
Concen: N.D.
Expected RT: 12.59 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 94

Sig	Exp Ratio
94	100
96	94.4



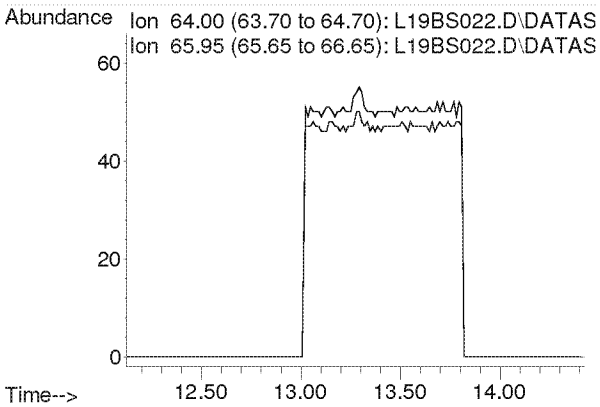


#11
Chloroethane
Concen: N.D.
Expected RT: 13.28 min

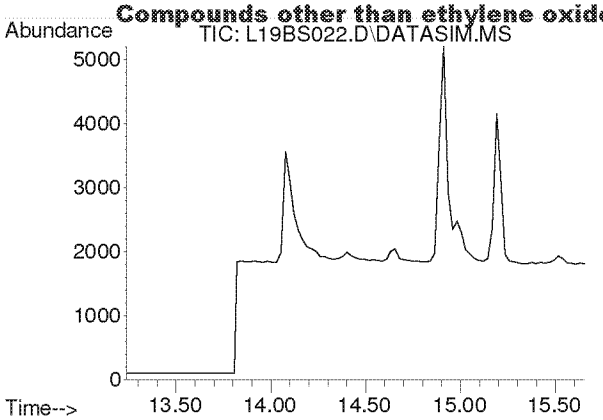
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



Compounds other than ethylene oxide were not quantitated.

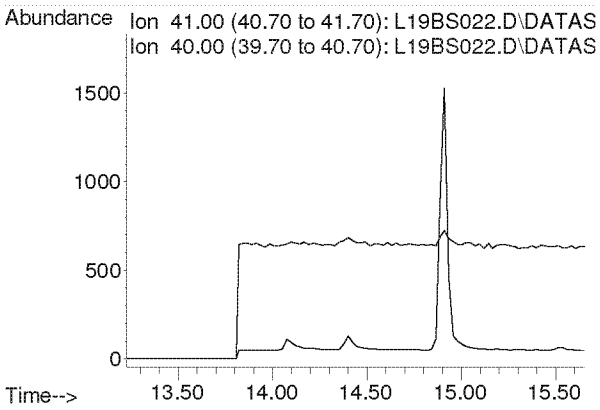


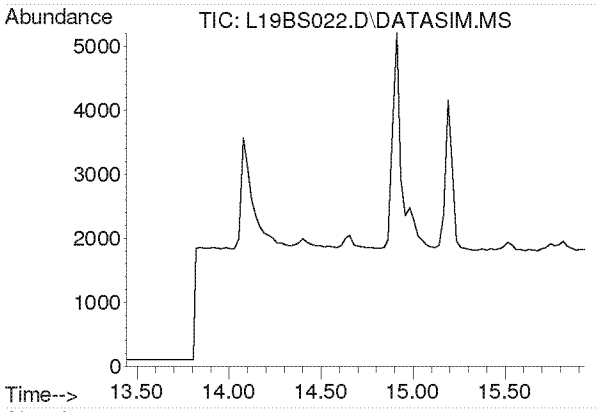
#12
Acetonitrile
Concen: N.D.
Expected RT: 14.36 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
40	52.8



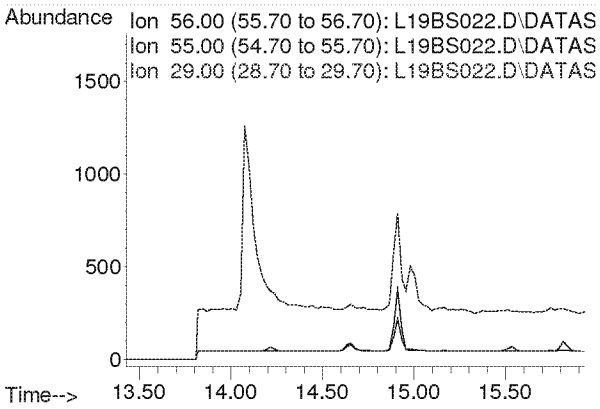


#13
Acrolein
Concen: N.D.
Expected RT: 14.63 min

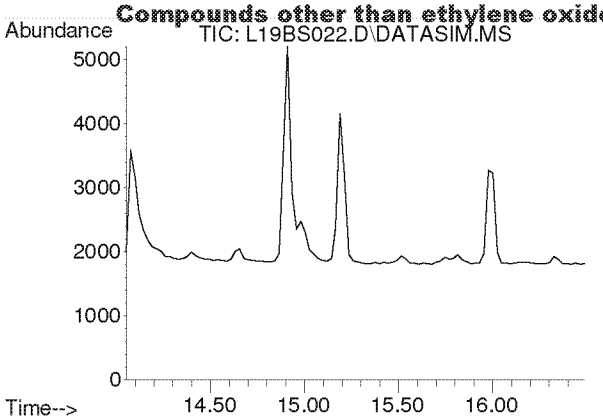
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 56

Sig	Exp Ratio
56	100
55	76.0
29	54.7



Compounds other than ethylene oxide were not quantitated.

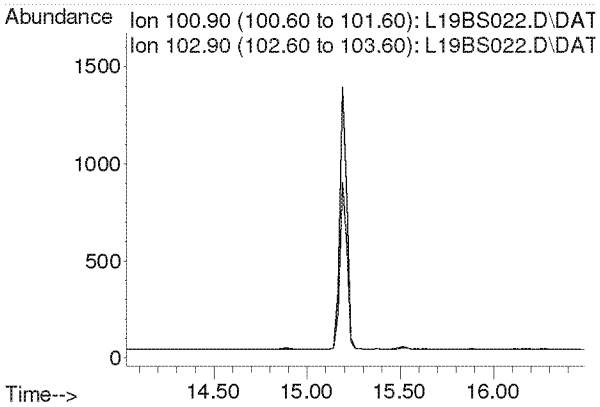


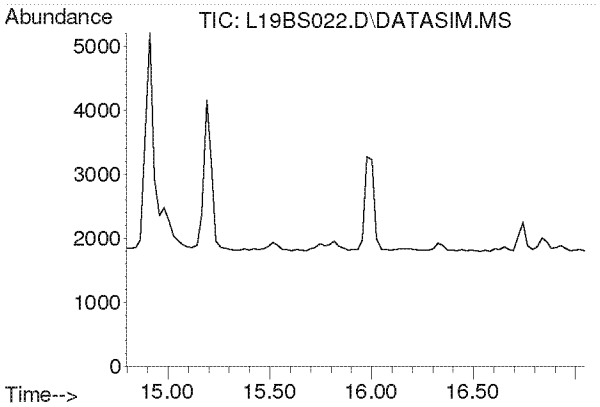
#14
Trichlorofluoromethane
Concen: N.D.
Expected RT: 15.19 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
103	64.6



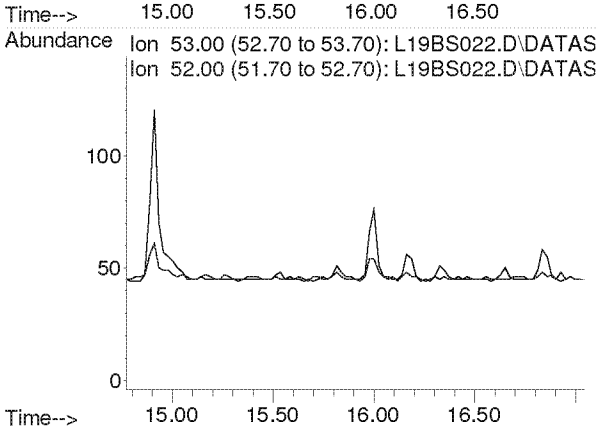


#15
Acrylonitrile
Concen: N.D.
Expected RT: 15.93 min

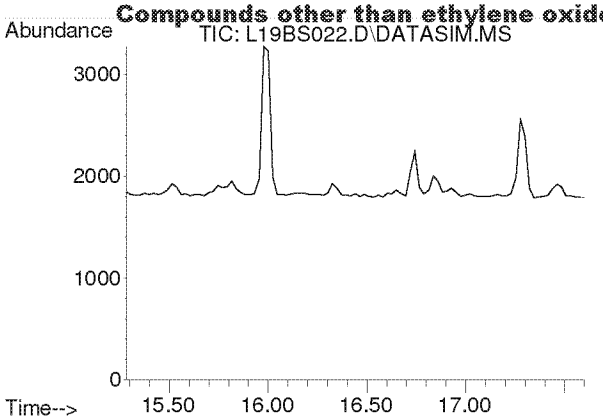
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
52	86.9



Compounds other than ethylene oxide were not quantitated.

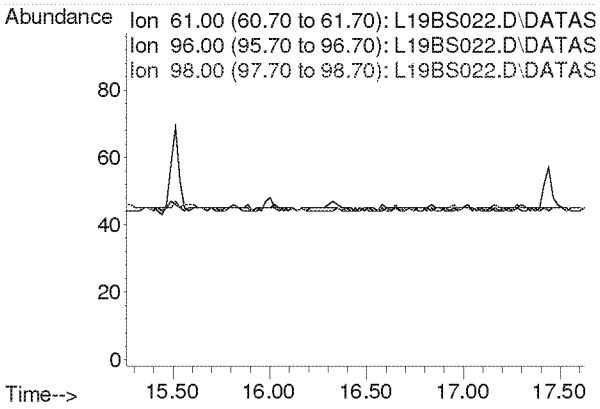


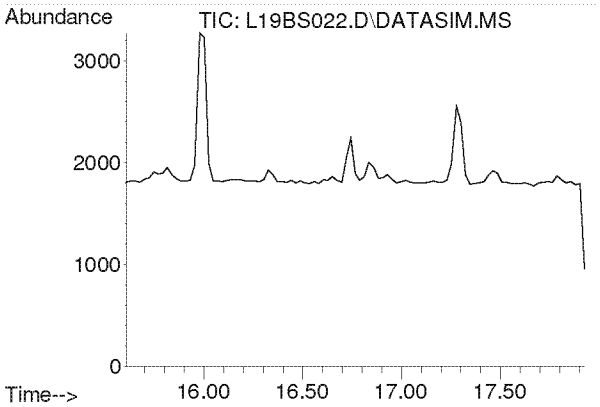
#16
1,1-Dichloroethene
Concen: N.D.
Expected RT: 16.42 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	59.1
98	38.2



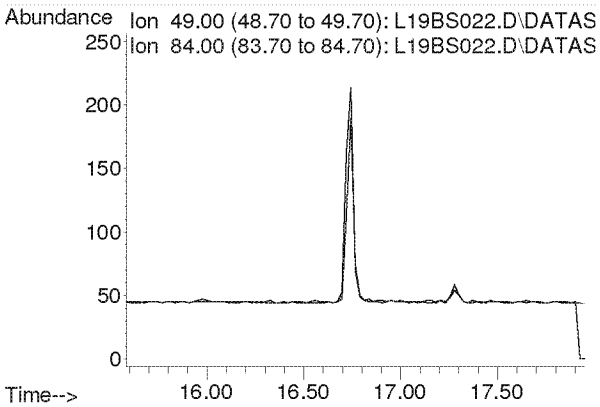


#17
Methylene Chloride
Concen: N.D.
Expected RT: 16.74 min

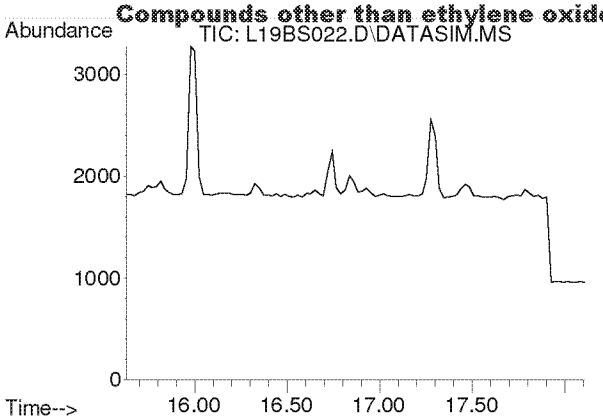
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 49

Sig	Exp Ratio
49	100
84	77.2



Compounds other than ethylene oxide were not quantitated.

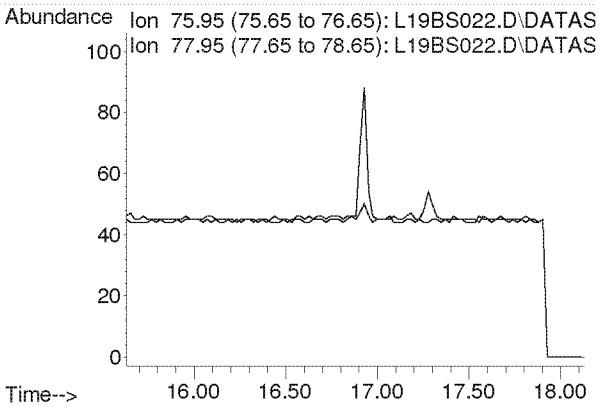


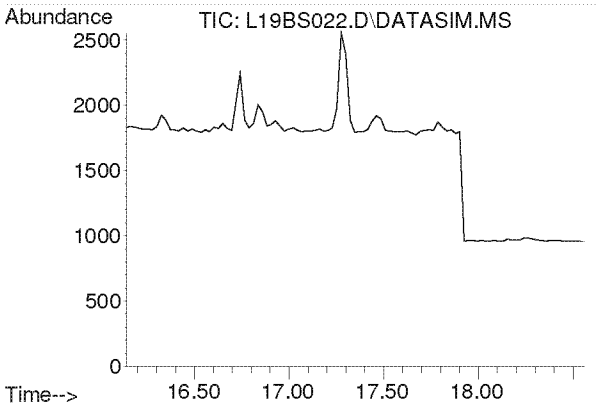
#18
Carbon Disulfide
Concen: N.D.
Expected RT: 16.93 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 76

Sig	Exp Ratio
76	100
78	9.2



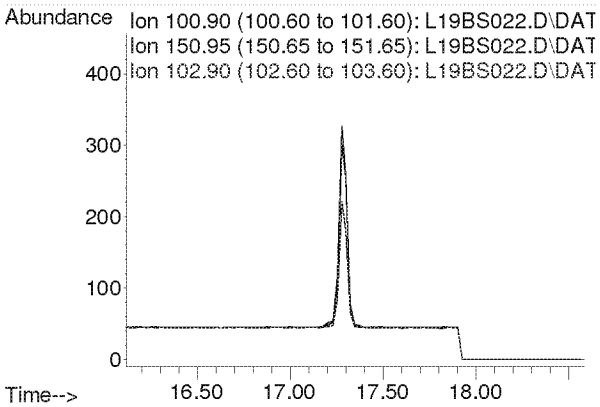


#19
Trichlorotrifluoroethane
Concen: N.D.
Expected RT: 17.28 min

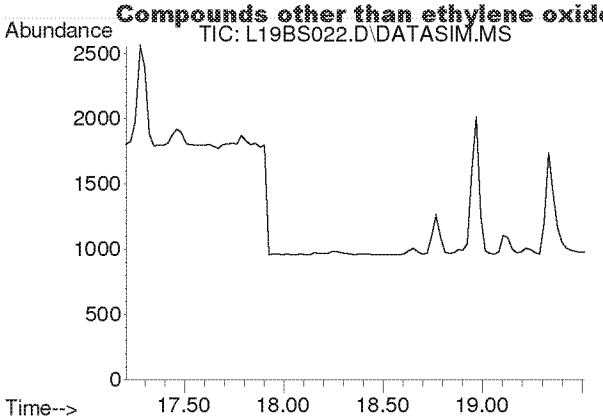
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
151	94.8
103	63.9



Compounds other than ethylene oxide were not quantitated.

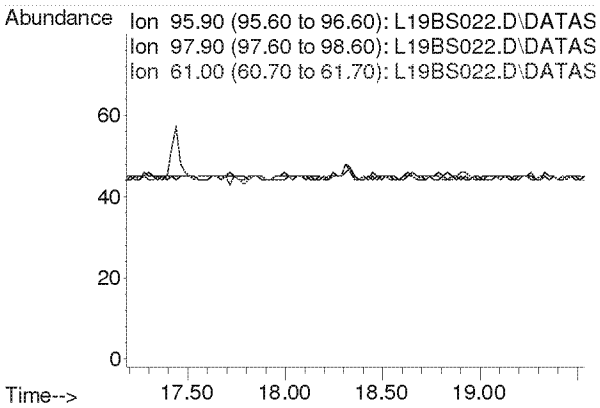


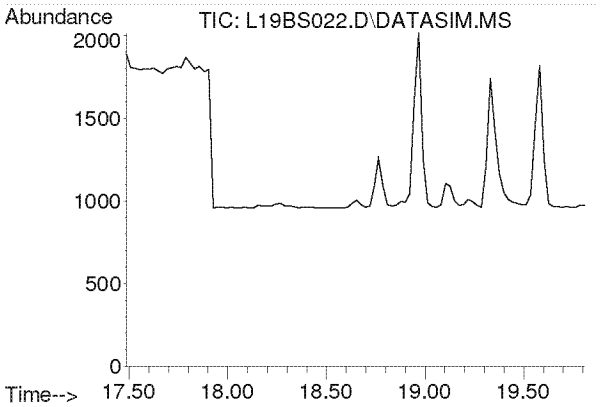
#20
trans-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 18.34 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 96

Sig	Exp Ratio
96	100
98	64.4
61	153.6



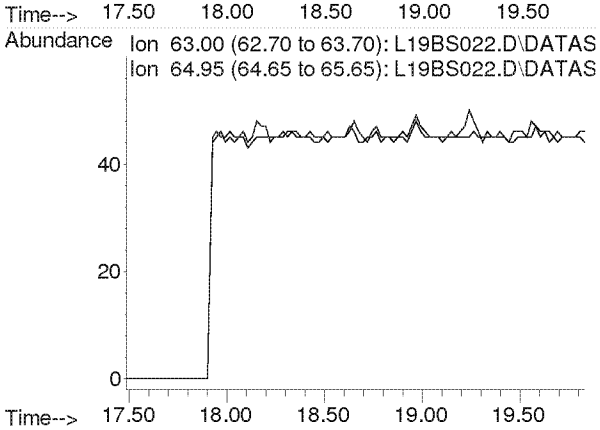


#21
1,1-Dichloroethane
Concen: N.D.
Expected RT: 18.63 min

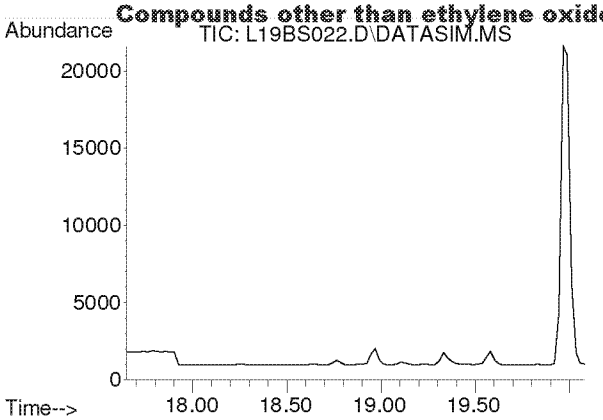
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
65	31.7



Compounds other than ethylene oxide were not quantitated.

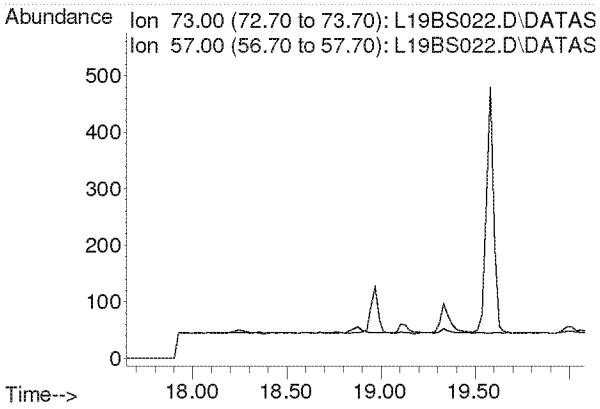


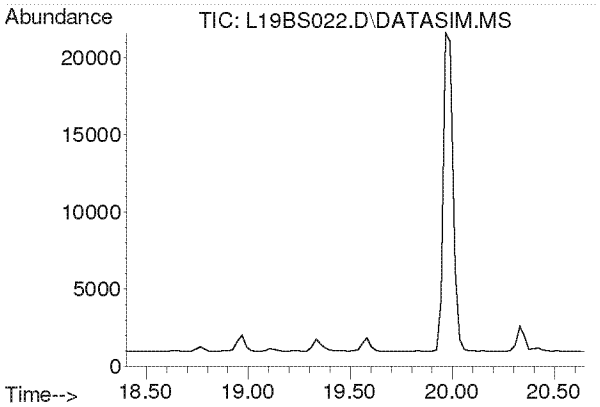
#22
Methyl tert-Butyl Ether
Concen: N.D.
Expected RT: 18.79 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
57	22.5



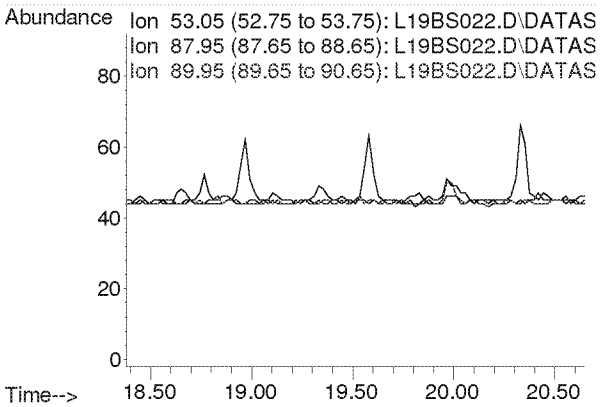


#23
Chloroprene
Concen: N.D.
Expected RT: 19.54 min

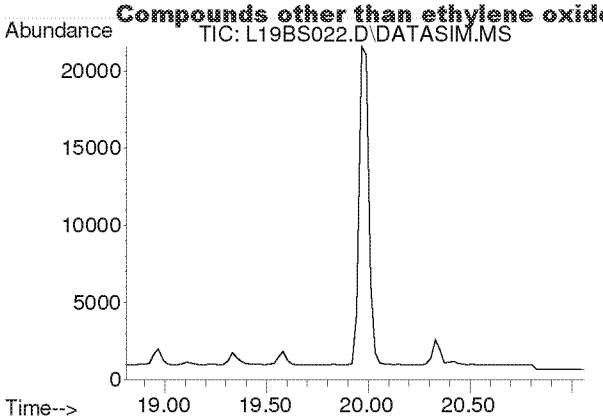
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	53.3
90	17.4



Compounds other than ethylene oxide were not quantitated.

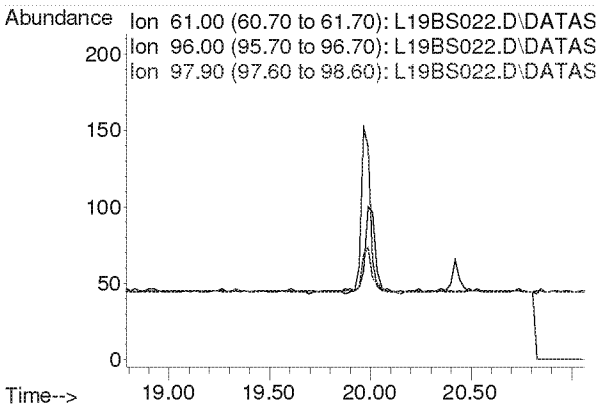


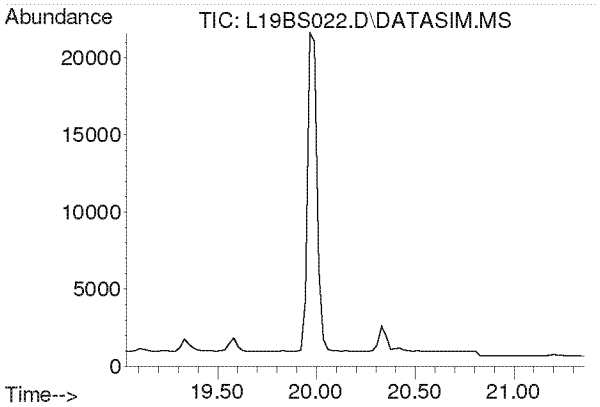
#24
cis-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 19.95 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	73.8
98	47.0



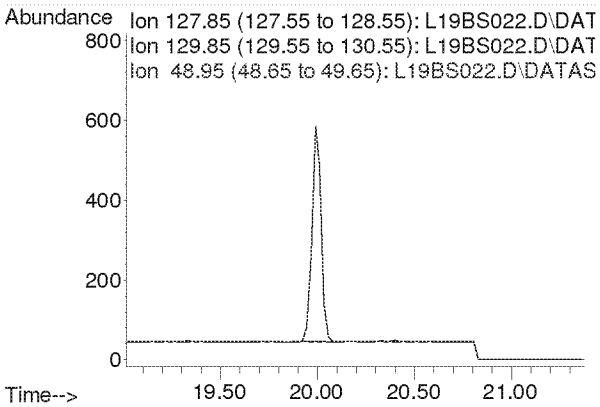


#25
Bromochloromethane
Concen: N.D.
Expected RT: 20.17 min

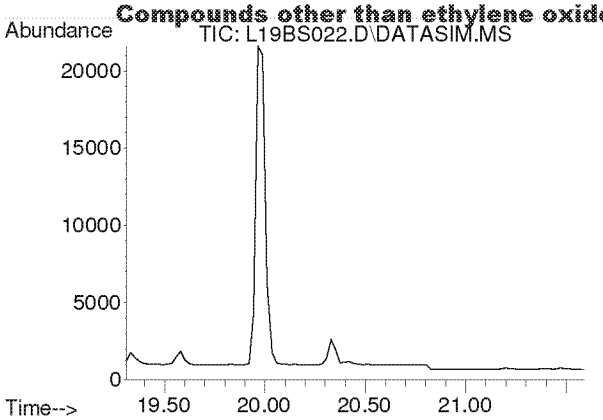
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 128

Sig	Exp Ratio
128	100
130	129.1
49	160.4



Compounds other than ethylene oxide were not quantitated.

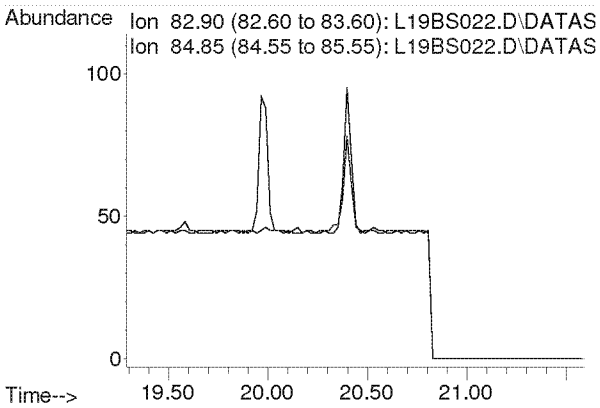


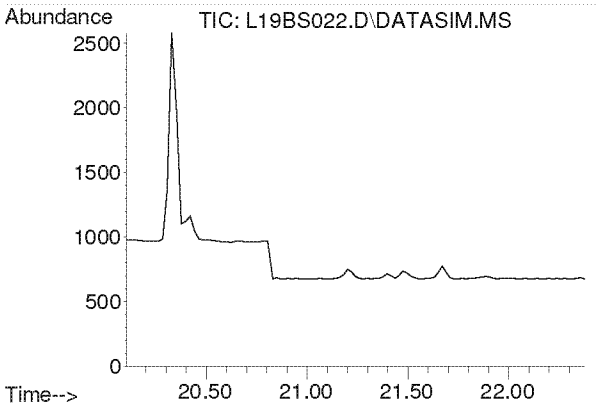
#26
Chloroform
Concen: N.D.
Expected RT: 20.40 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.4



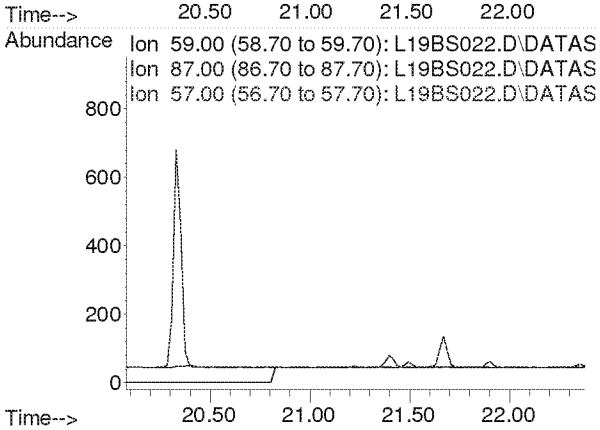


#27
Ethyl tert-Butyl Ether
Concen: N.D.
Expected RT: 21.18 min

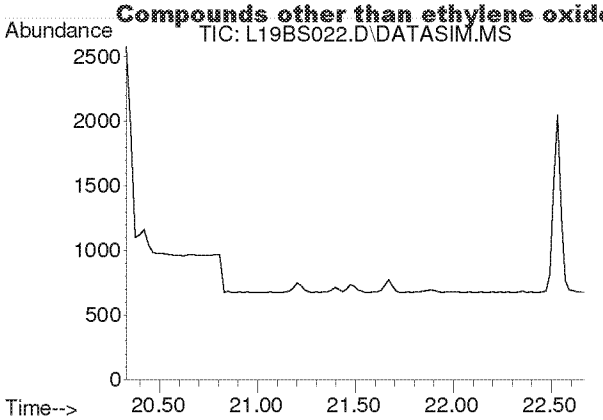
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 59

Sig	Exp Ratio
59	100
87	39.4
57	33.2



Compounds other than ethylene oxide were not quantitated.

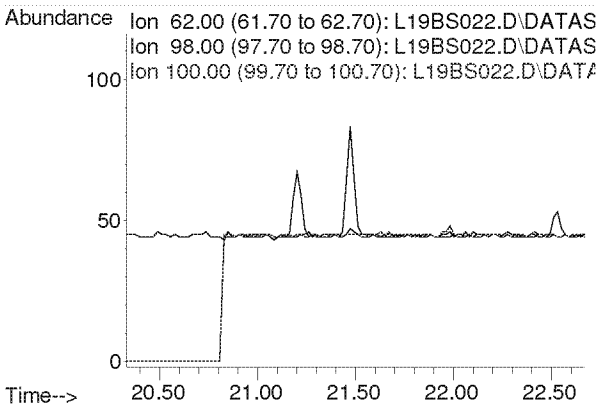


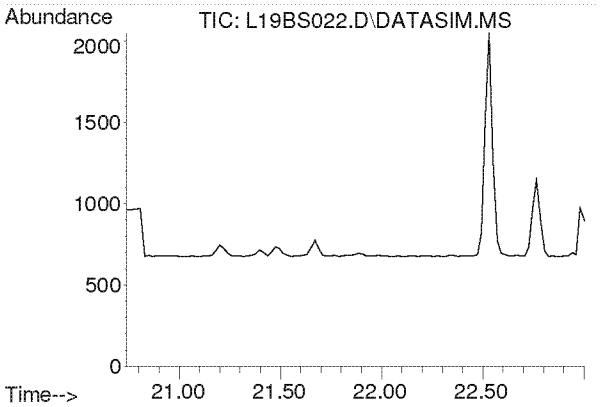
#28
1,2-Dichloroethane
Concen: N.D.
Expected RT: 21.48 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
98	6.3
100	4.0



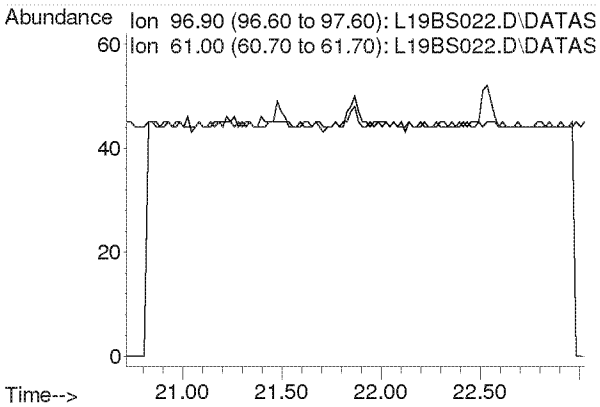


#30
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 21.87 min

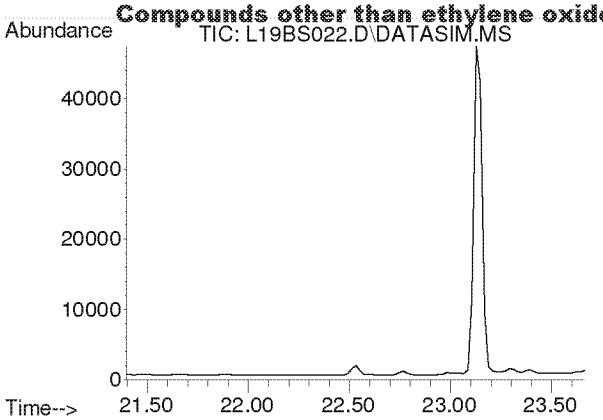
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
61	62.1



Compounds other than ethylene oxide were not quantitated.

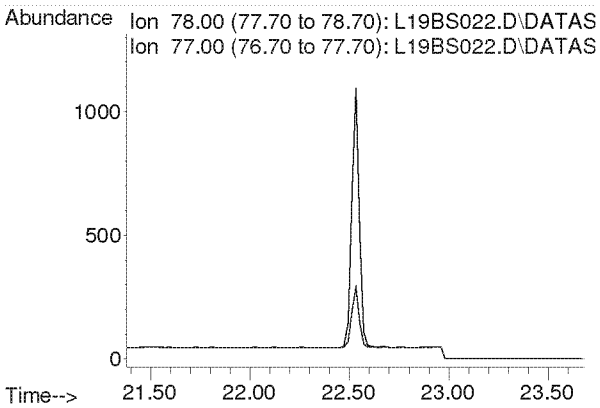


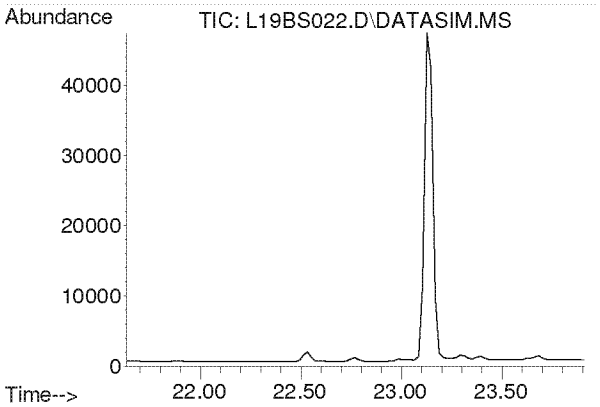
#31
Benzene
Concen: N.D.
Expected RT: 22.53 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 78

Sig	Exp Ratio
78	100
77	22.8



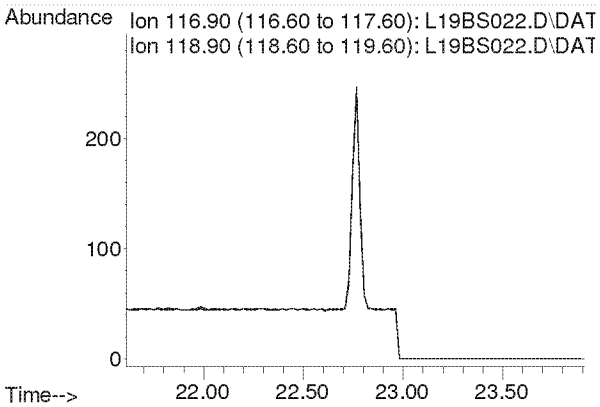


#32
Carbon Tetrachloride
Concen: N.D.
Expected RT: 22.77 min

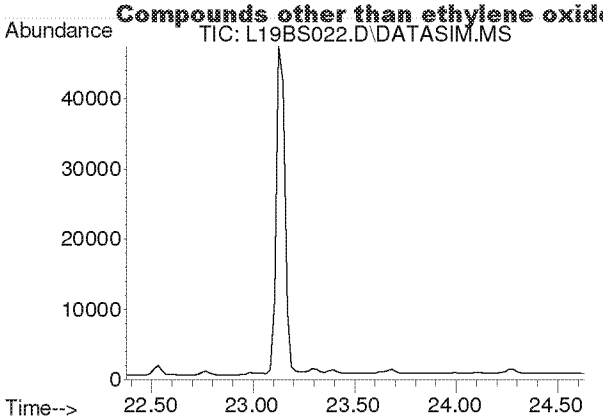
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 117

Sig	Exp Ratio
117	100
119	96.3



Compounds other than ethylene oxide were not quantitated.

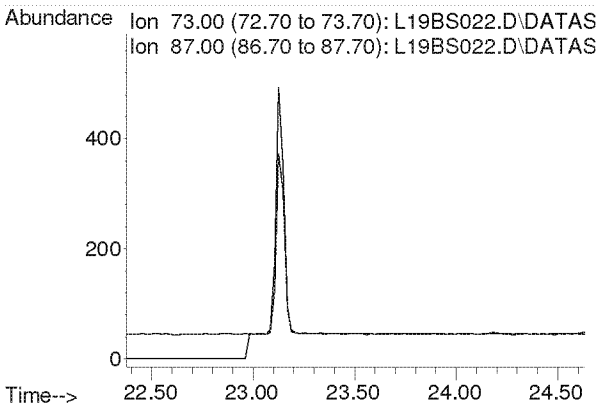


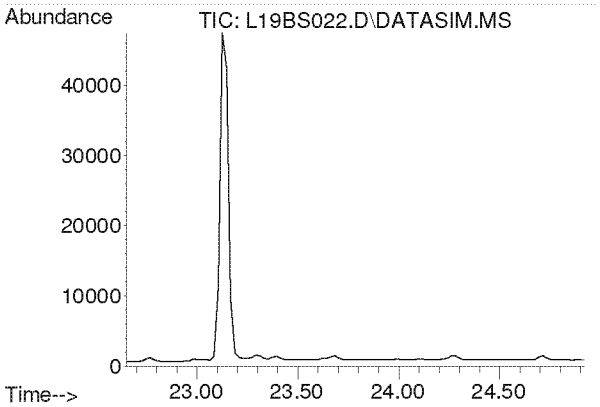
#33
tert-Amyl Methyl Ether
Concen: N.D.
Expected RT: 23.52 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
87	25.1



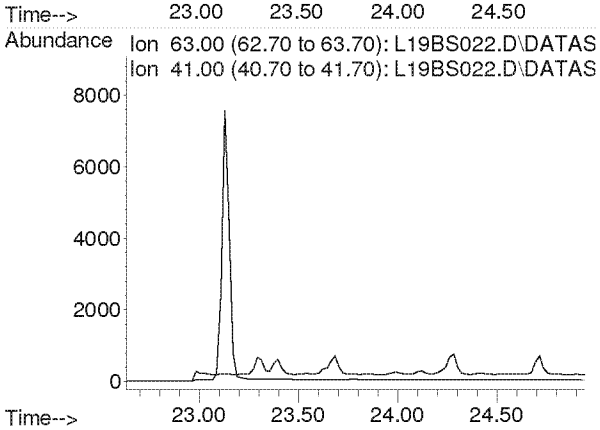


#34
1,2-Dichloropropane
Concen: N.D.
Expected RT: 23.79 min

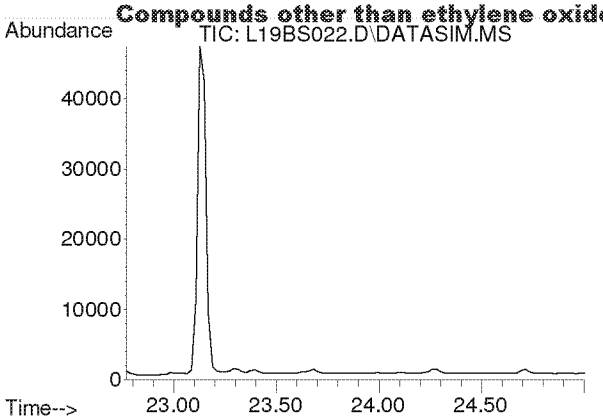
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	219.9



Compounds other than ethylene oxide were not quantitated.

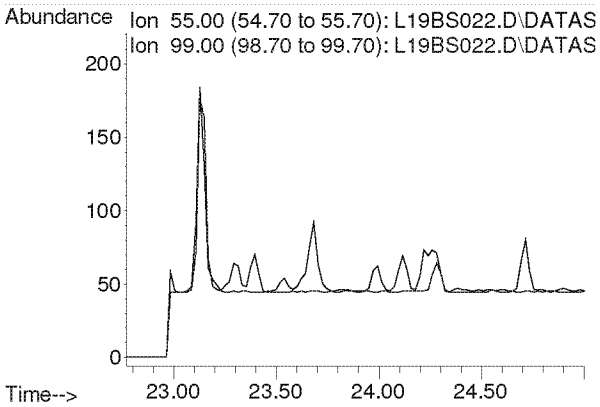


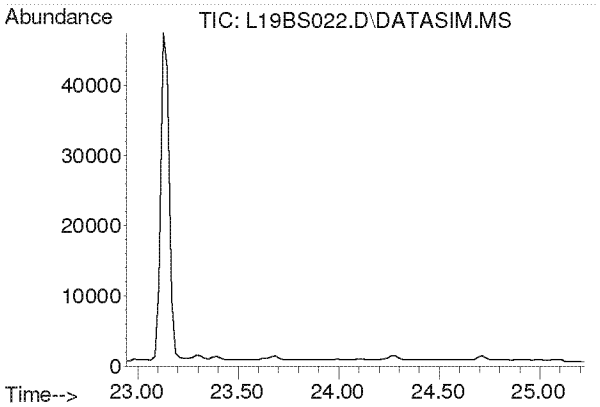
#35
Ethyl Acrylate
Concen: N.D.
Expected RT: 23.89 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
99	6.3



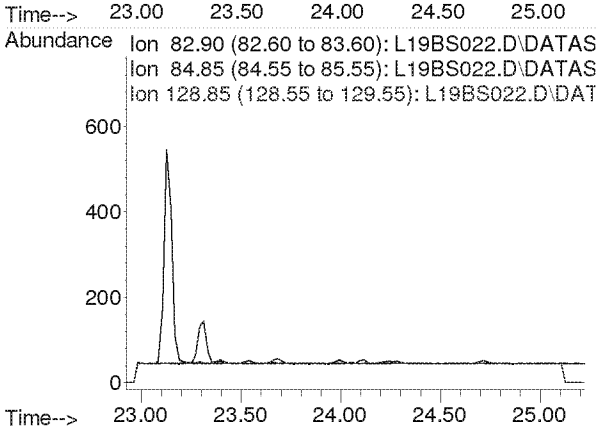


#36
Bromodichloromethane
Concen: N.D.
Expected RT: 24.08 min

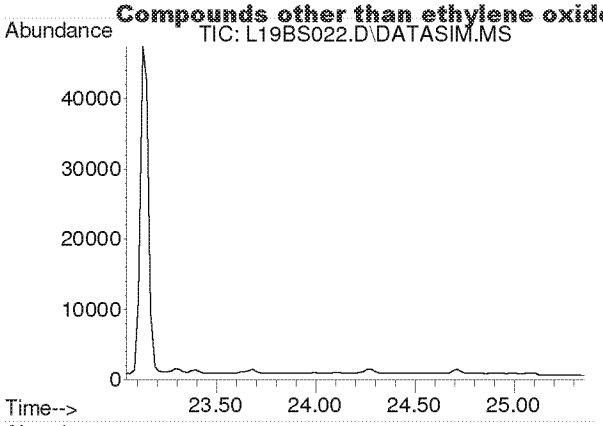
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.7
129	12.4



Compounds other than ethylene oxide were not quantitated.

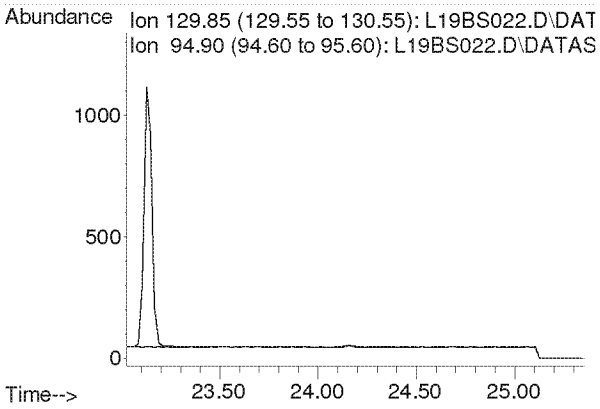


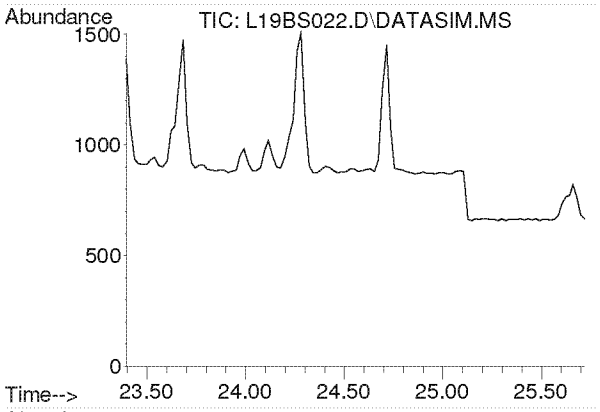
#37
Trichloroethylene
Concen: N.D.
Expected RT: 24.18 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 130

Sig	Exp Ratio
130	100
95	106.1



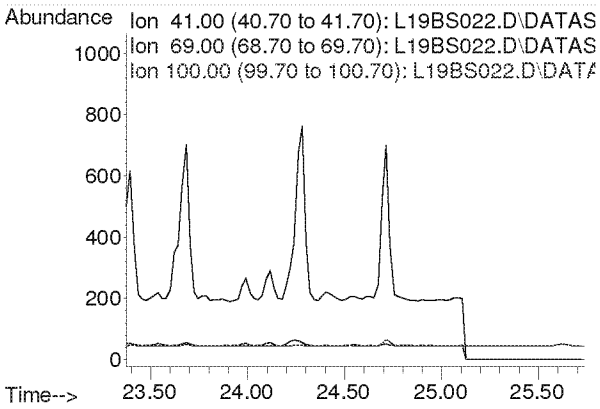


#38
Methyl Methacrylate
Concen: N.D.
Expected RT: 24.53 min

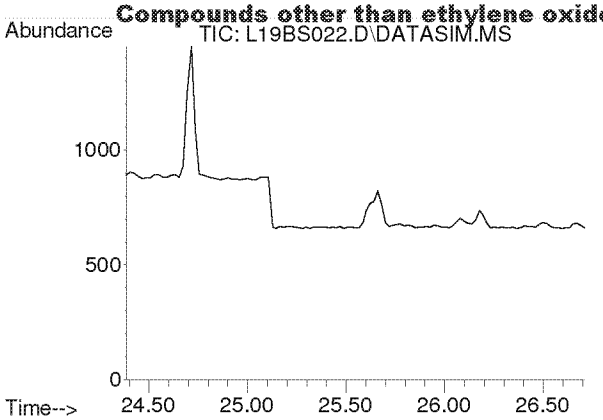
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
69	21.0
100	5.6



Compounds other than ethylene oxide were not quantitated.

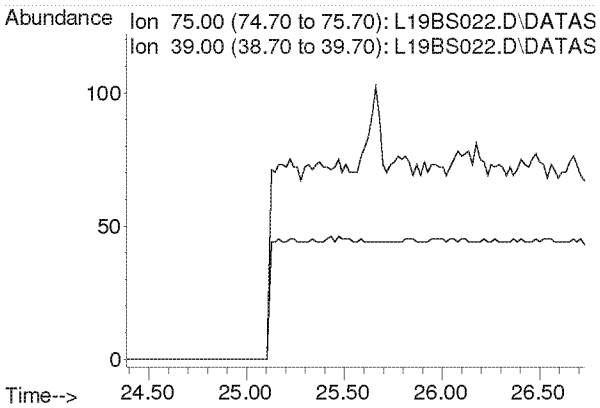


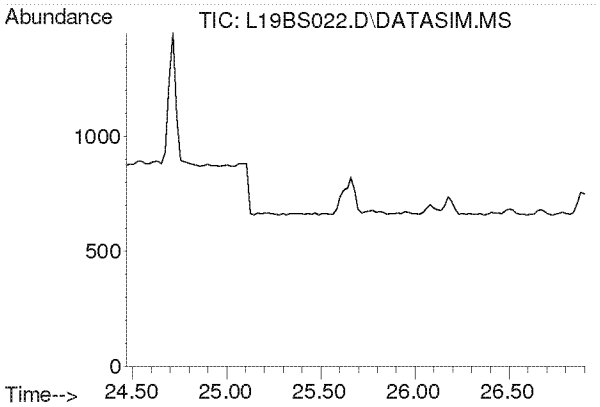
#39
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 25.53 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	54.2



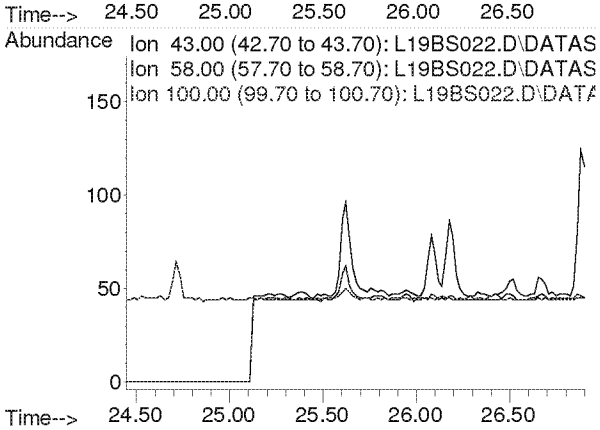


#40
Methyl Isobutyl Ketone
Concen: N.D.
Expected RT: 25.60 min

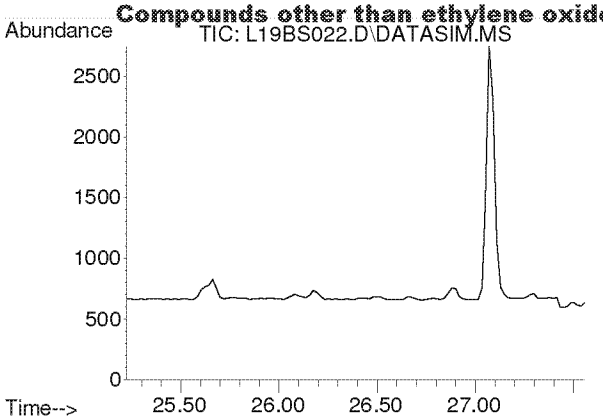
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	35.0
100	8.7



Compounds other than ethylene oxide were not quantitated.

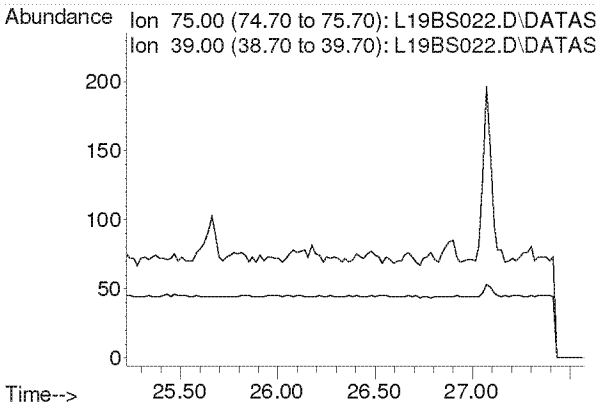


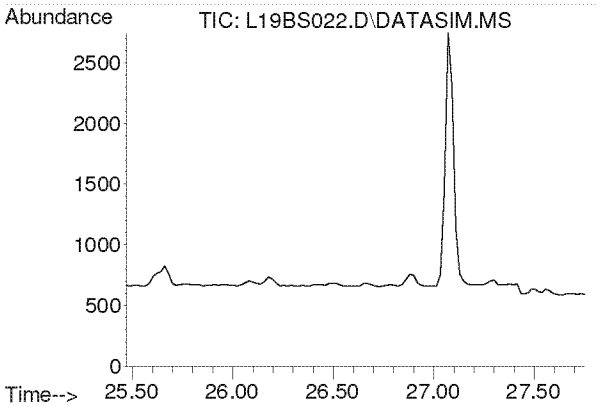
#41
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 26.37 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	53.6



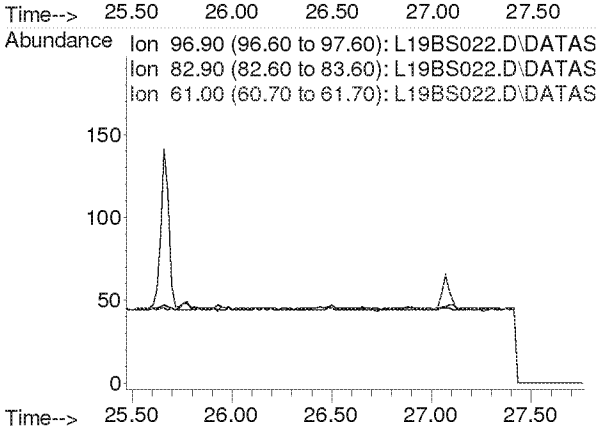


#42
1,1,2-Trichloroethane
Concen: N.D.
Expected RT: 26.62 min

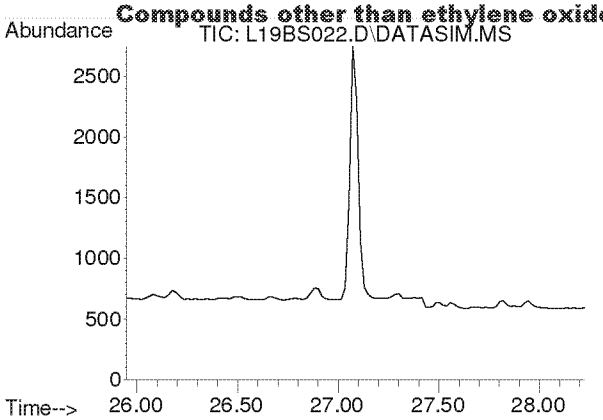
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
83	94.2
61	62.2



Compounds other than ethylene oxide were not quantitated.

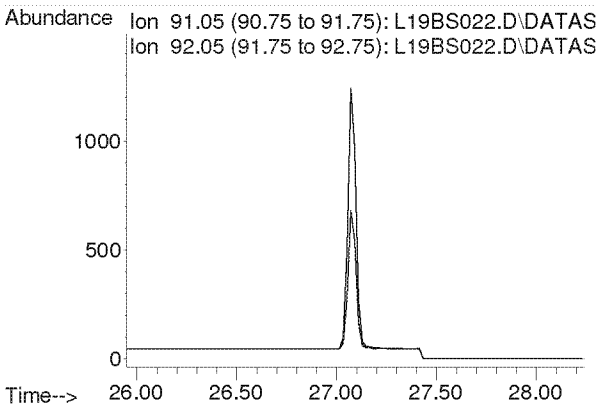


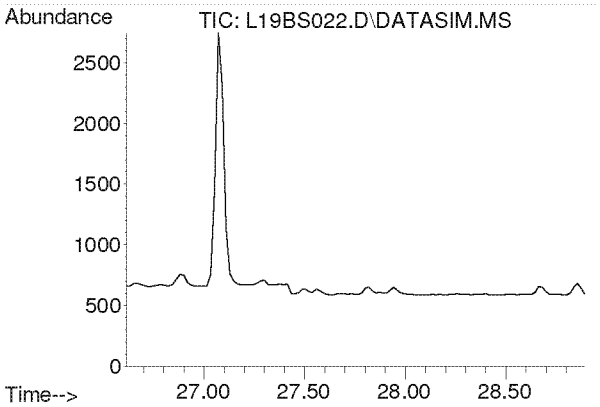
#44
Toluene
Concen: N.D.
Expected RT: 27.09 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	52.5



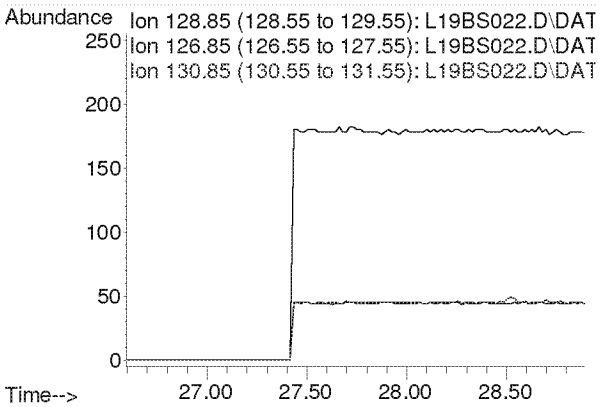


#45
Dibromochloromethane
Concen: N.D.
Expected RT: 27.75 min

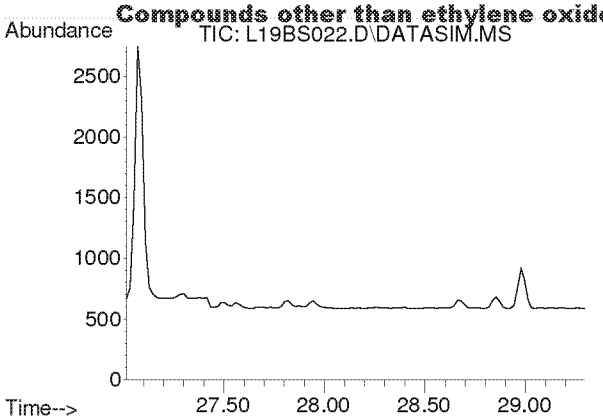
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 129

Sig	Exp Ratio
129	100
127	19.3
131	6.0



Compounds other than ethylene oxide were not quantitated.

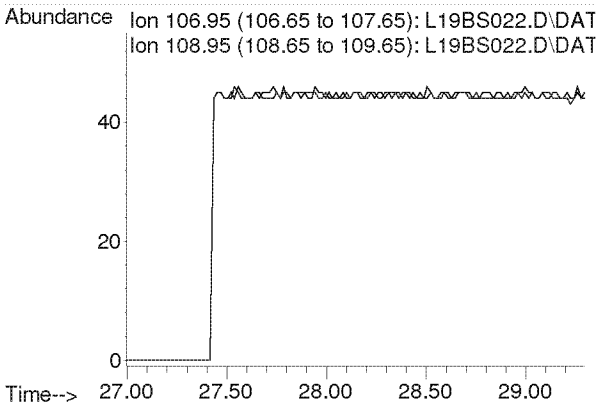


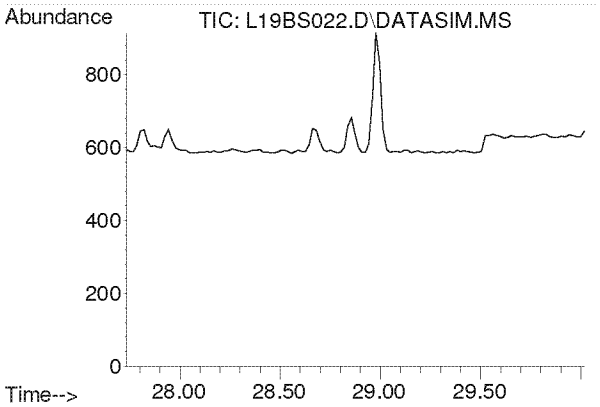
#46
1,2-Dibromoethane
Concen: N.D.
Expected RT: 28.15 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 107

Sig	Exp Ratio
107	100
109	94.2



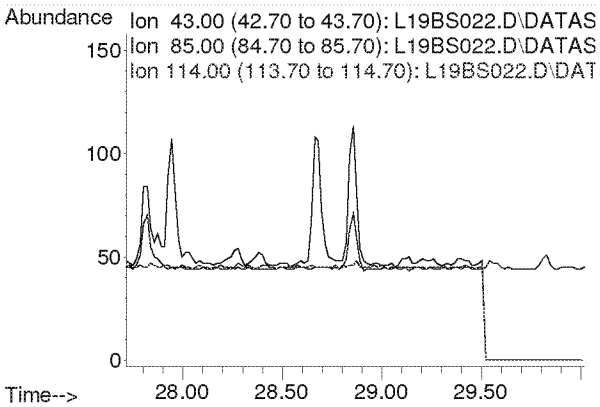


#47
n-Octane
Concen: N.D.
Expected RT: 28.87 min

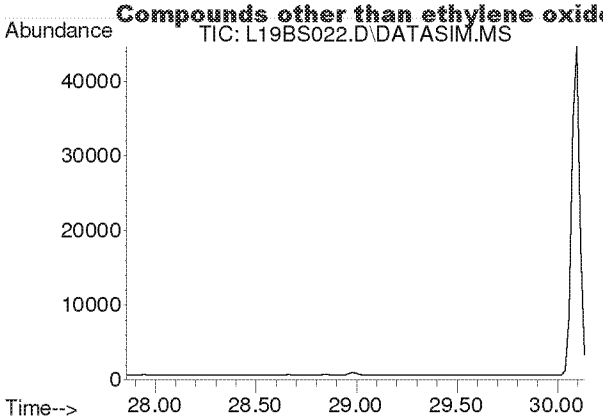
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
85	41.3
114	2.8



Compounds other than ethylene oxide were not quantitated.

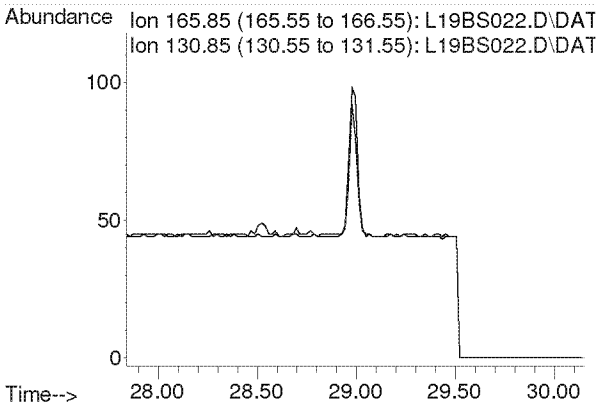


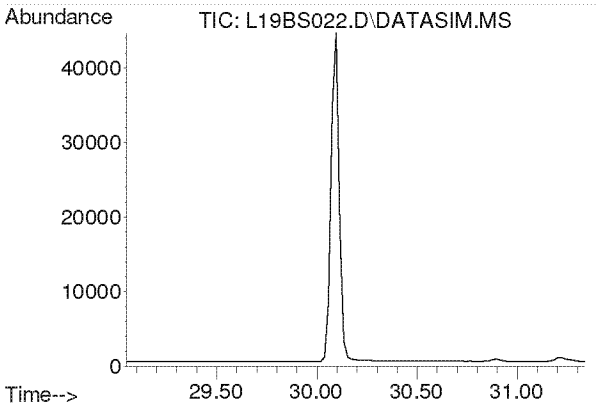
#48
Tetrachloroethylene
Concen: N.D.
Expected RT: 29.00 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 166

Sig	Exp Ratio
166	100
131	76.9



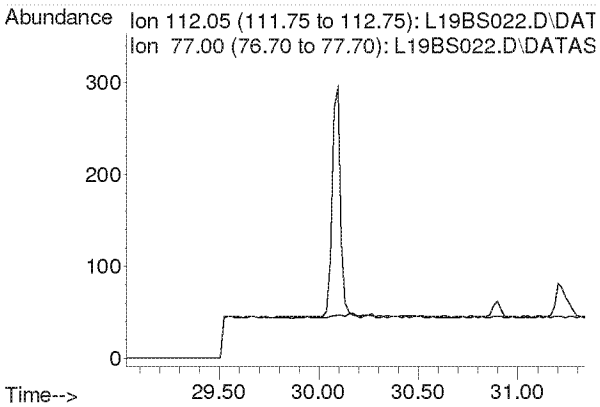


#49
Chlorobenzene
Concen: N.D.
Expected RT: 30.19 min

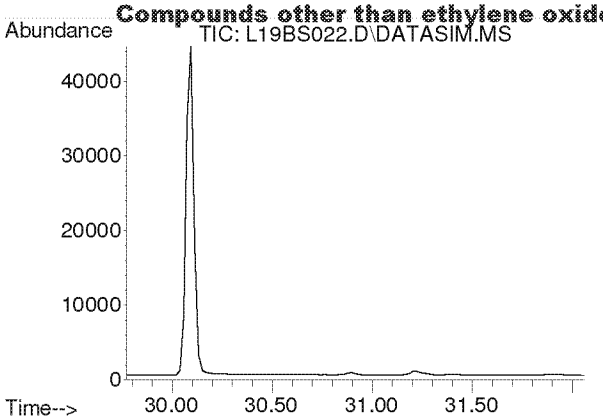
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 112

Sig	Exp Ratio
112	100
77	59.7



Compounds other than ethylene oxide were not quantitated.

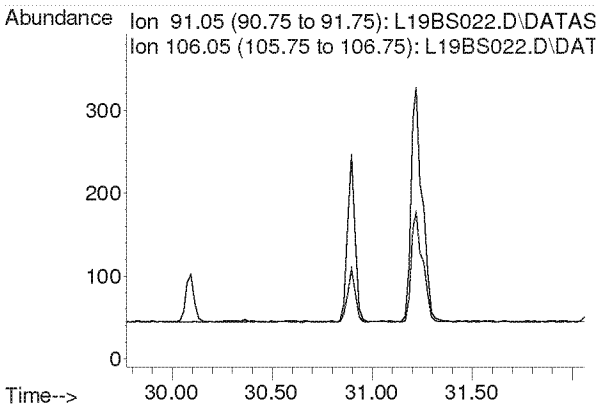


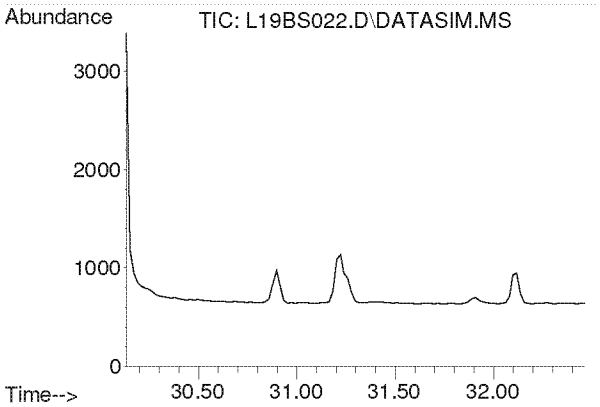
#50
Ethylbenzene
Concen: N.D.
Expected RT: 30.92 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	32.5



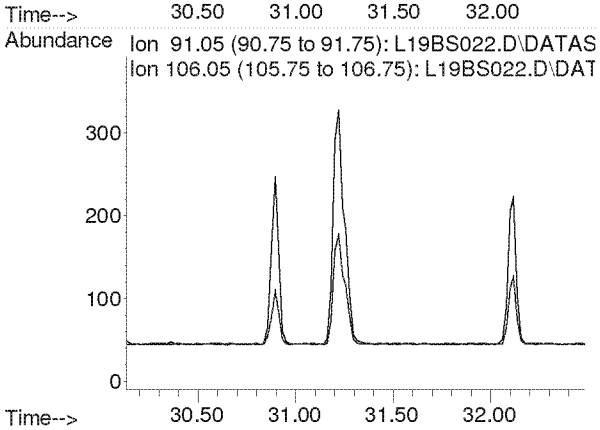


#51
m,p-Xylene
Concen: N.D.
Expected RT: 31.28 min

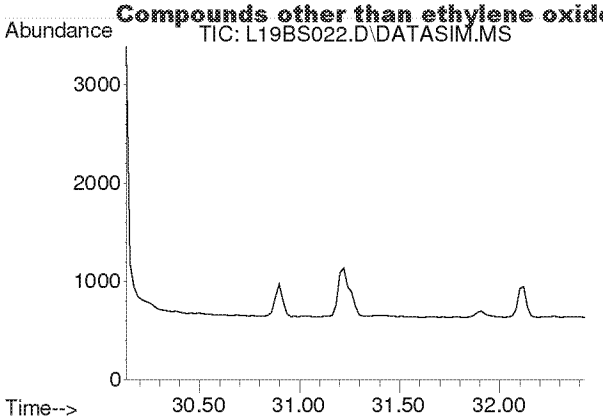
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	46.6



Compounds other than ethylene oxide were not quantitated.

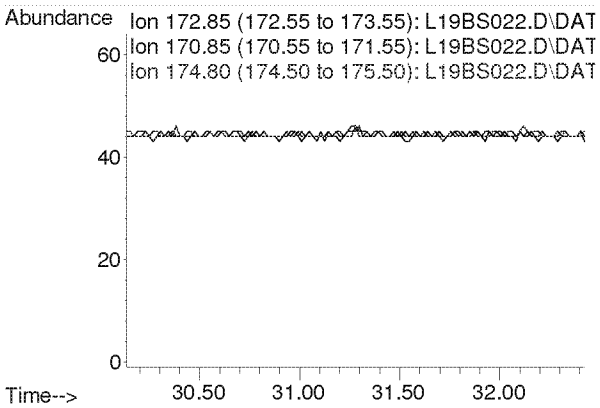


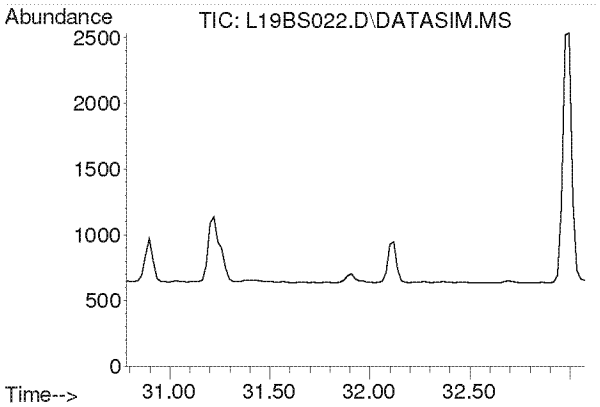
#52
Bromoform
Concen: N.D.
Expected RT: 31.28 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 173

Sig	Exp Ratio
173	100
171	51.3
175	48.9



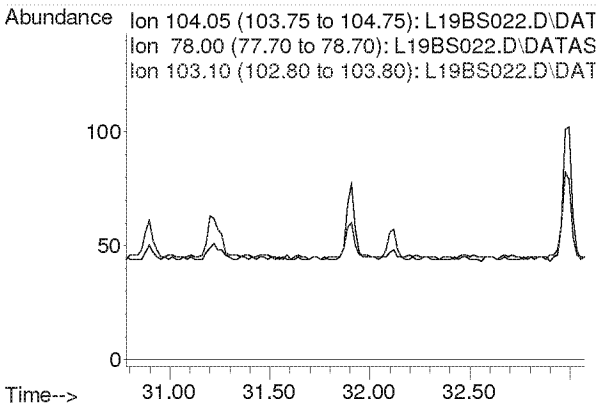


#53
Styrene
Concen: N.D.
Expected RT: 31.93 min

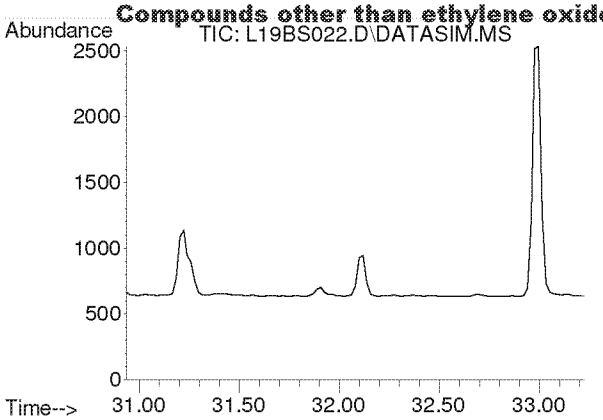
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 104

Sig	Exp Ratio
104	100
78	44.3
103	0.0



Compounds other than ethylene oxide were not quantitated.

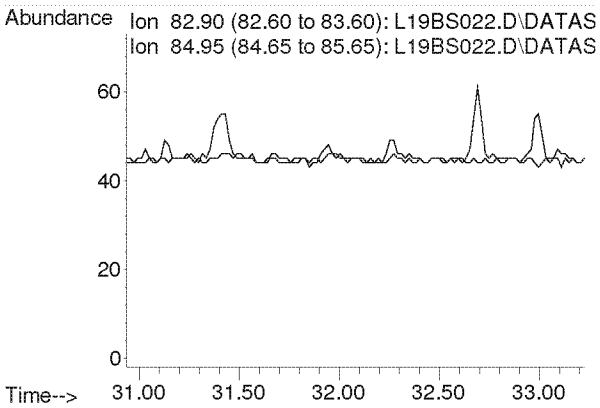


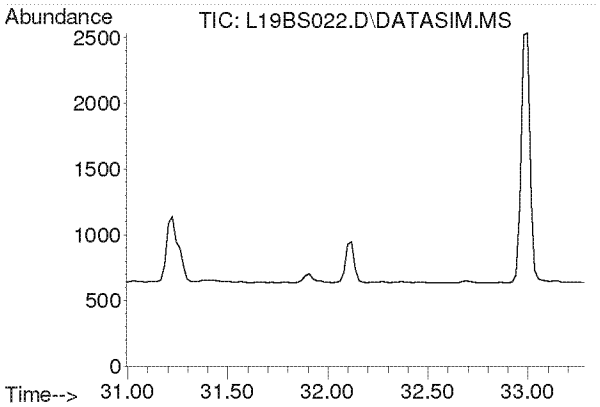
#54
1,1,2,2-Tetrachloroethane
Concen: N.D.
Expected RT: 32.08 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.5



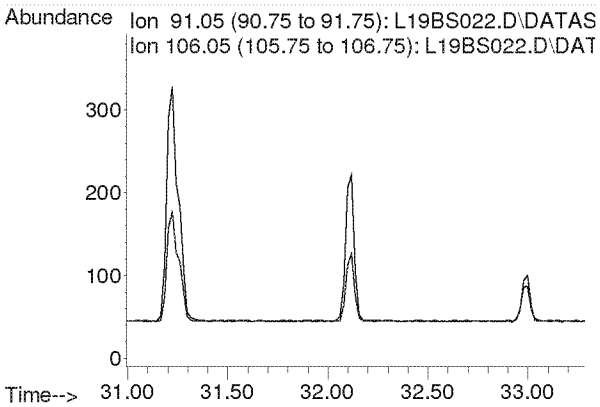


#55
o-Xylene
Concen: N.D.
Expected RT: 32.14 min

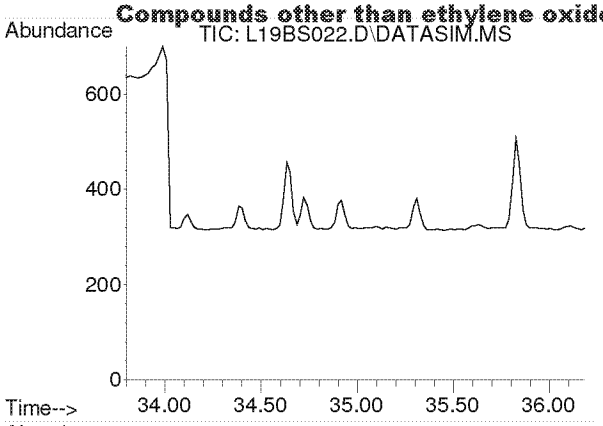
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	45.8



Compounds other than ethylene oxide were not quantitated.

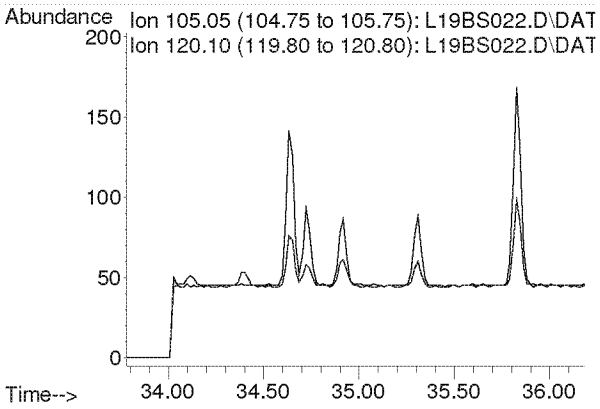


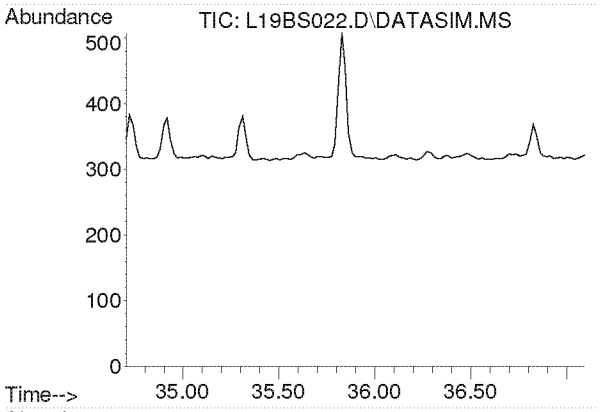
#56
1,3,5-Trimethylbenzene
Concen: N.D.
Expected RT: 34.94 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	46.0



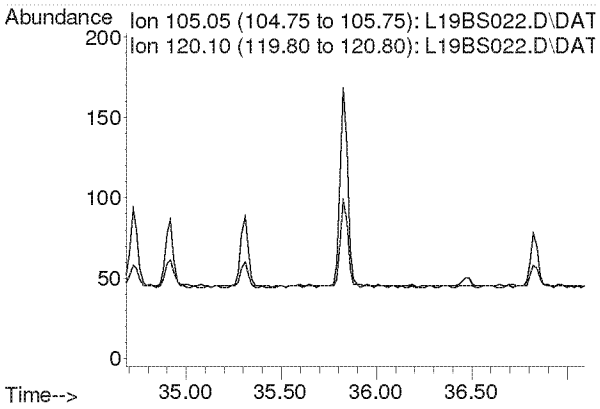


#57
1,2,4-Trimethylbenzene
Concen: N.D.
Expected RT: 35.85 min

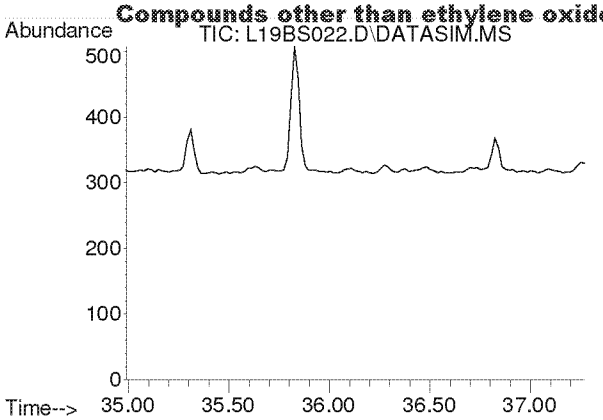
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	44.0



Compounds other than ethylene oxide were not quantitated.

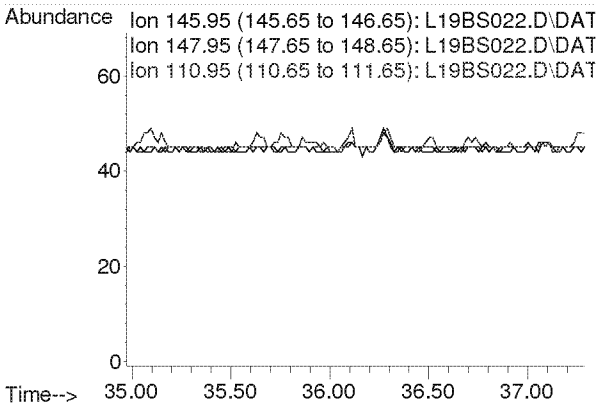


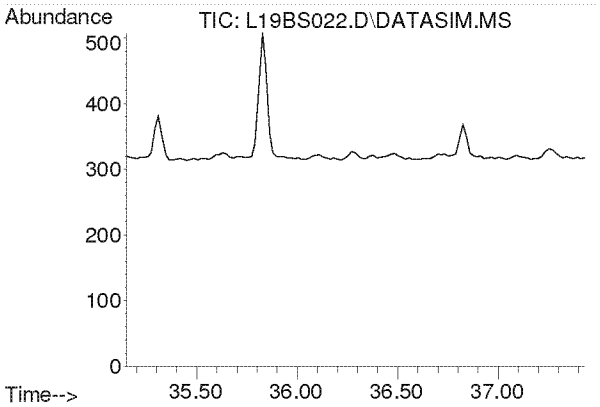
#58
m-Dichlorobenzene
Concen: N.D.
Expected RT: 36.13 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.1
111	40.1



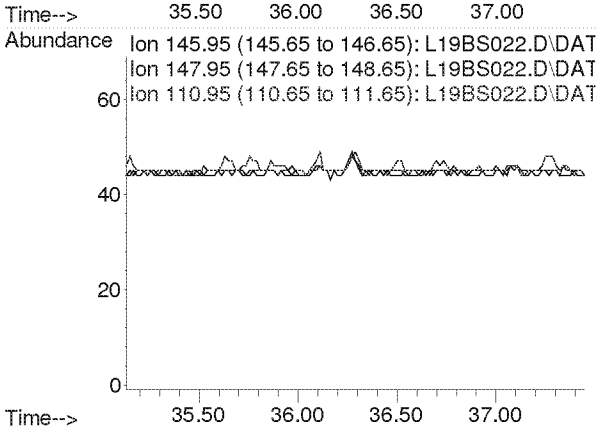


#59
p-Dichlorobenzene
Concen: N.D.
Expected RT: 36.29 min

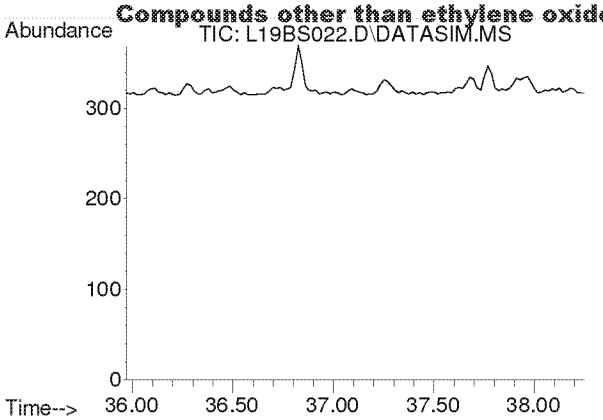
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.3
111	38.7



Compounds other than ethylene oxide were not quantitated.

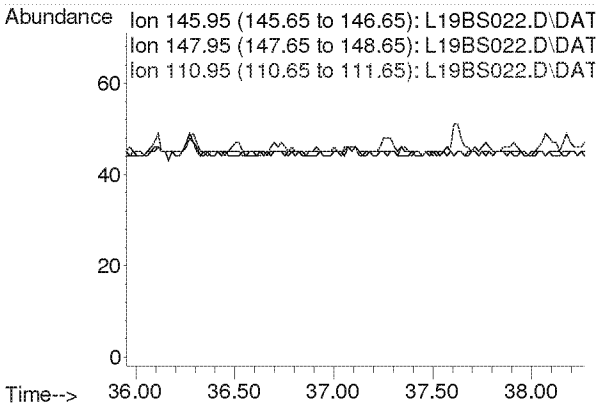


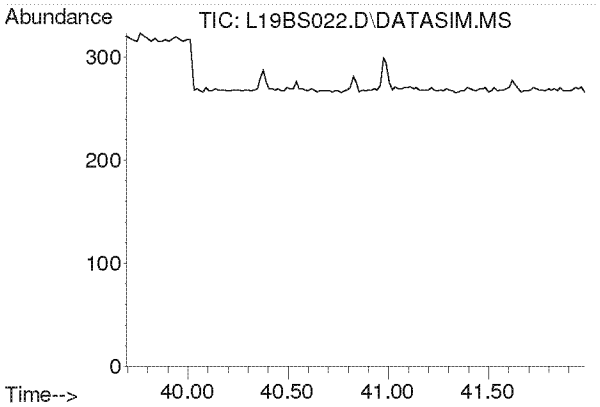
#60
o-Dichlorobenzene
Concen: N.D.
Expected RT: 37.11 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.8



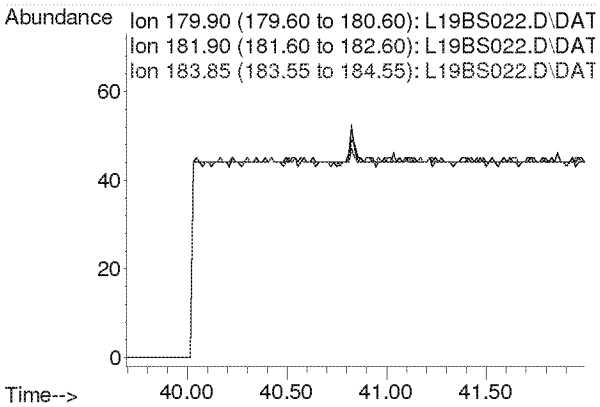


#61
1,2,4-Trichlorobenzene
Concen: N.D.
Expected RT: 40.84 min

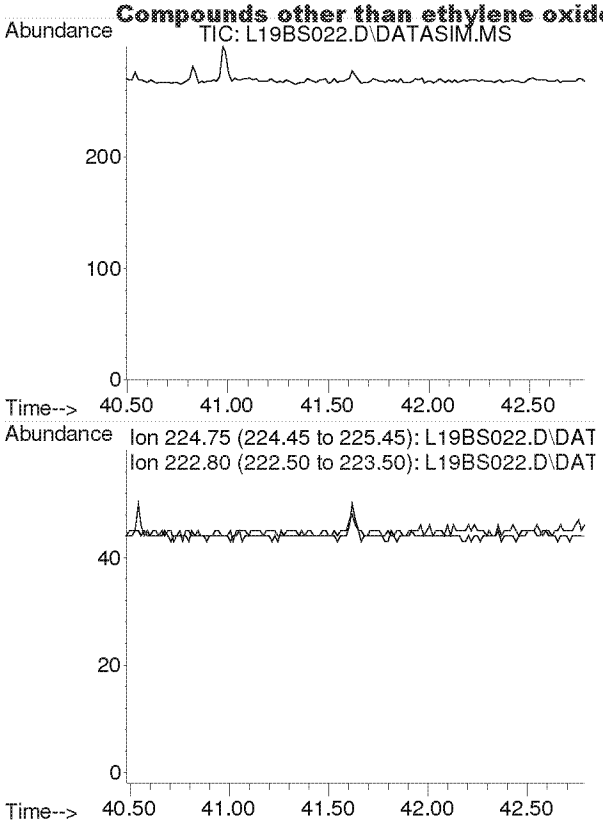
Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 180

Sig	Exp Ratio
180	100
182	94.6
184	30.2



Compounds other than ethylene oxide were not quantitated.



#62
Hexachloro-1,3-butadiene
Concen: N.D.
Expected RT: 41.63 min

Lab File: L19BS022.D
Acq: 20 Feb 2019 7:59 am

Tgt Ion: 225

Sig	Exp Ratio
225	100
223	62.4

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS023.D
Acq On : 20 Feb 2019 8:59 am (#1); 20-Feb-19, 08:54:17 (#2)
Operator : MAH
Sample : 9021401-08
Misc : HINSDALE S. HS 2/12/19 (Sig #1); (Sig #2)
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 20 14:48:25 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

cl = MK

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) IS-Hexane-d14	19.970	66	40075	4.7700 ppbv	-0.02
29) IS-1,4-Difluorobenzene	23.130	114	100911	4.9900 ppbv	-0.02
43) IS-Chlorobenzene-d5	30.097	117	75885	4.7400 ppbv	-0.02

System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D. d	
3) Propylene	0.000	41	0	N.D. d	
4) Dichlorodifluoromethane	0.000	85	0	N.D. d	
5) Chloromethane	0.000	50	0	N.D. d	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D. d	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D. d	
9) Ethylene oxide	12.455	29	391	0.1706 ppbv #	25
10) Bromomethane	0.000	94	0	N.D. d	
11) Chloroethane	0.000	64	0	N.D.	
12) Acetonitrile	0.000	41	0	N.D. d	
13) Acrolein	0.000	56	0	N.D. d	
14) Trichlorofluoromethane	0.000	101	0	N.D. d	
15) Acrylonitrile	0.000	53	0	N.D.	
16) 1,1-Dichloroethene	0.000	61	0	N.D.	
17) Methylene Chloride	0.000	49	0	N.D. d	
18) Carbon Disulfide	0.000	76	0	N.D. d	
19) Trichlorotrifluoroethane	0.000	101	0	N.D. d	
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) 1,1-Dichloroethane	0.000	63	0	N.D.	
22) Methyl tert-Butyl Ether	0.000	73	0	N.D. d	
23) Chloroprene	0.000	53	0	N.D.	
24) cis-1,2-Dichloroethylene	0.000	61	0	N.D.	
25) Bromochloromethane	0.000	128	0	N.D.	
26) Chloroform	0.000	83	0	N.D. d	
27) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
28) 1,2-Dichloroethane	0.000	62	0	N.D. d	
30) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
31) Benzene	0.000	78	0	N.D. d	
32) Carbon Tetrachloride	0.000	117	0	N.D. d	
33) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) 1,2-Dichloropropane	0.000	63	0	N.D.	
35) Ethyl Acrylate	0.000	55	0	N.D.	
36) Bromodichloromethane	0.000	83	0	N.D.	
37) Trichloroethylene	0.000	130	0	N.D.	
38) Methyl Methacrylate	0.000	41	0	N.D.	
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	0.000	43	0	N.D. d	
41) trans-1,3-Dichloropropene	0.000	75	0	N.D.	
42) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
44) Toluene	0.000	91	0	N.D. d	
45) Dibromochloromethane	0.000	129	0	N.D.	
46) 1,2-Dibromoethane	0.000	107	0	N.D.	
47) n-Octane	0.000	43	0	N.D. d	
48) Tetrachloroethylene	0.000	166	0	N.D. d	
49) Chlorobenzene	0.000	112	0	N.D.	
50) Ethylbenzene	0.000	91	0	N.D. d	

Compounds other than ethylene oxide were not quantitated

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS023.D
Acq On : 20 Feb 2019 8:59 am (#1); 20-Feb-19, 08:54:17 (#2)
Operator : MAH
Sample : 9021401-08
Misc : HINSDALE S. HS 2/12/19 (Sig #1); (Sig #2)
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 20 14:48:25 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	0.000	91	0	N.D.	d
52) Bromoform	0.000	173	0	N.D.	
53) Styrene	0.000	104	0	N.D.	d
54) 1,1,2,2-Tetrachloroethane	0.000	83	0	N.D.	
55) o-Xylene	0.000	91	0	N.D.	d
56) 1,3,5-Trimethylbenzene	0.000	105	0	N.D.	d
57) 1,2,4-Trimethylbenzene	0.000	105	0	N.D.	d
58) m-Dichlorobenzene	0.000	146	0	N.D.	
59) p-Dichlorobenzene	0.000	146	0	N.D.	
60) o-Dichlorobenzene	0.000	146	0	N.D.	
61) 1,2,4-Trichlorobenzene	0.000	180	0	N.D.	
62) Hexachloro-1,3-butadiene	0.000	225	0	N.D.	

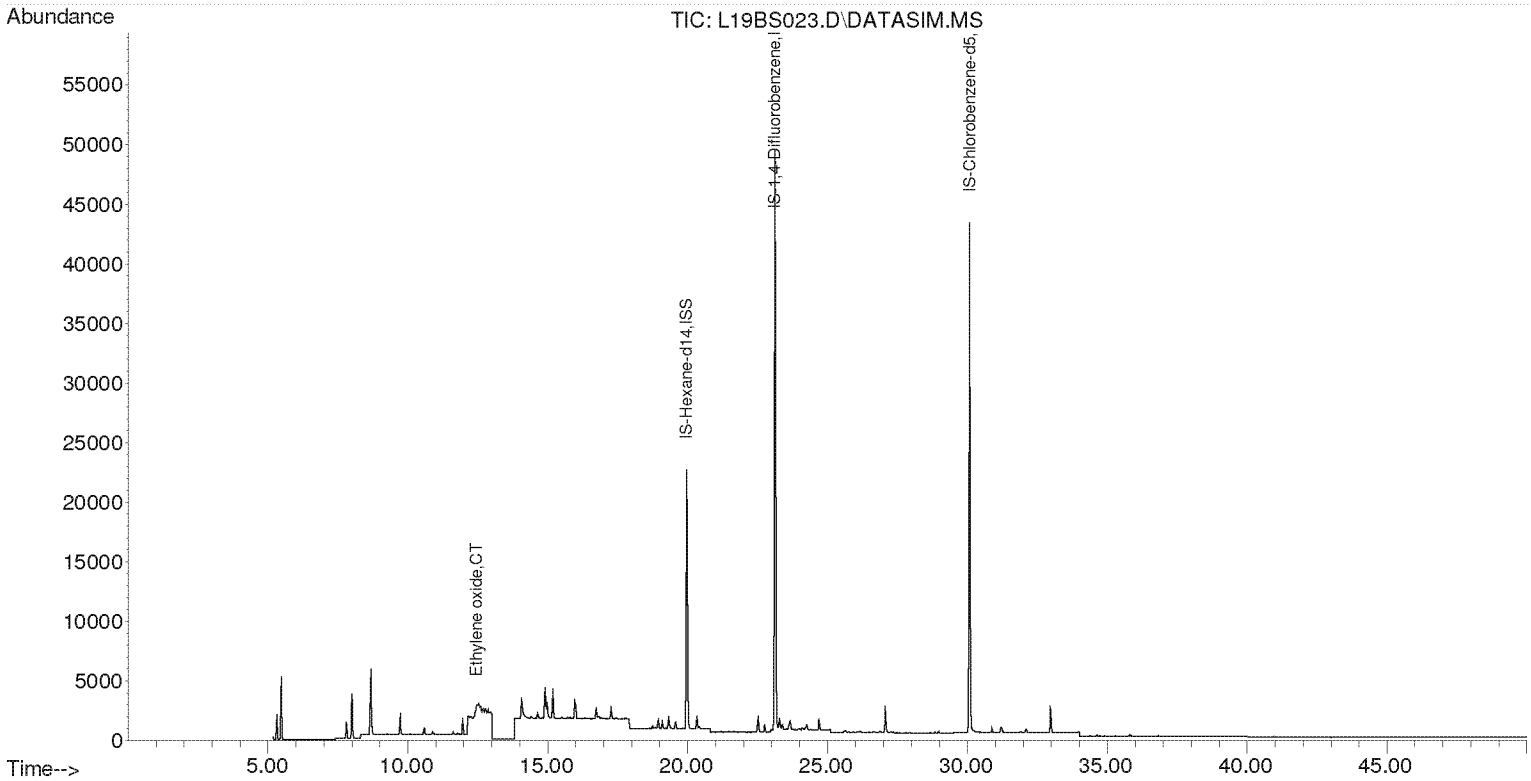
(#) = qualifier out of range (m) = manual integration (+) = signals summed

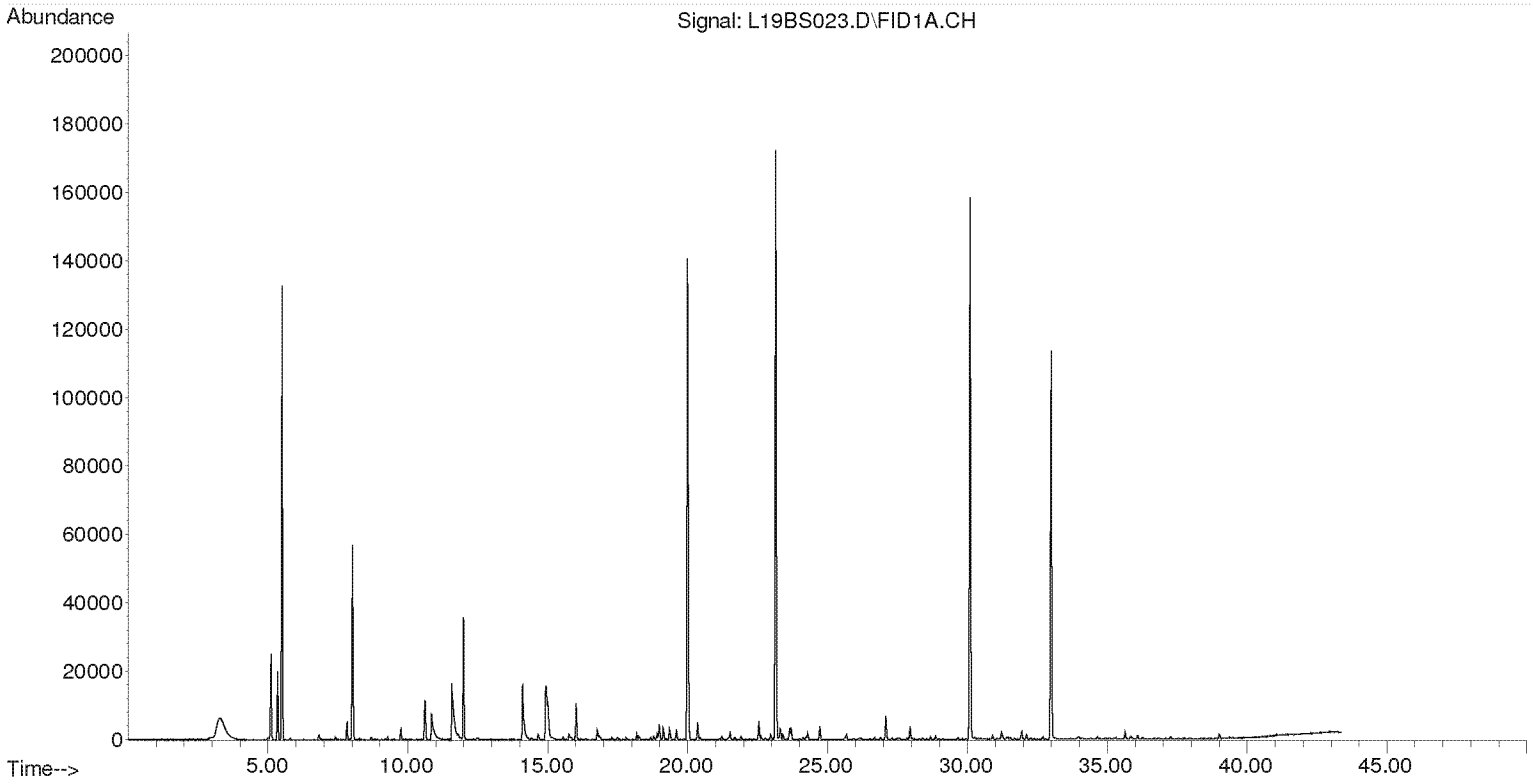
ED_002475_00000244-00182

Compounds other than ethylene oxide were not quantitated.

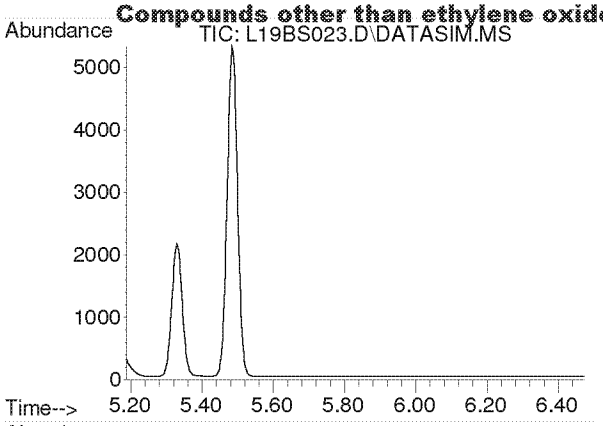
Data Path : Y:\MASS SPEC 1 DATA\L19BS\
Data File : L19BS023.D
Acq On : 20 Feb 2019 8:59 am (#1); 20 Feb 2019 8:54 am (#2)
Operator : MAH
Sample : 9021401-08
Misc : HINSDALE S. HS 2/12/19 (Sig #1); (Sig #2)
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Feb 20 13:55:31 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration





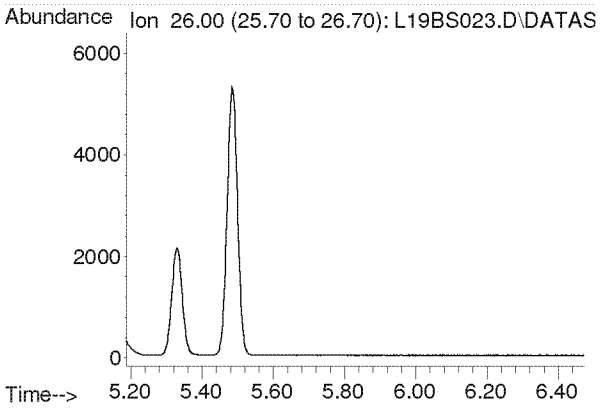
Compounds other than ethylene oxide were not quantitated.

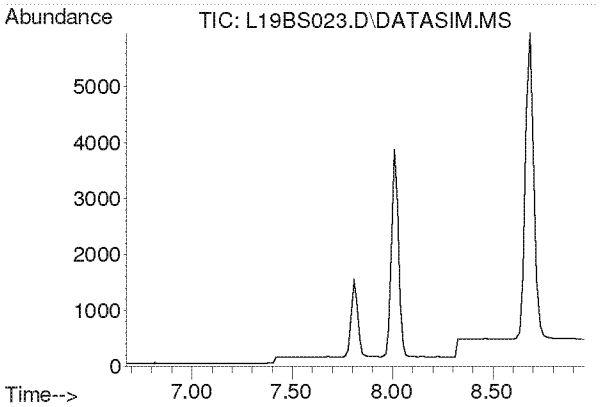


#2
Acetylene
Concen: N.D.
Expected RT: 5.40 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 26



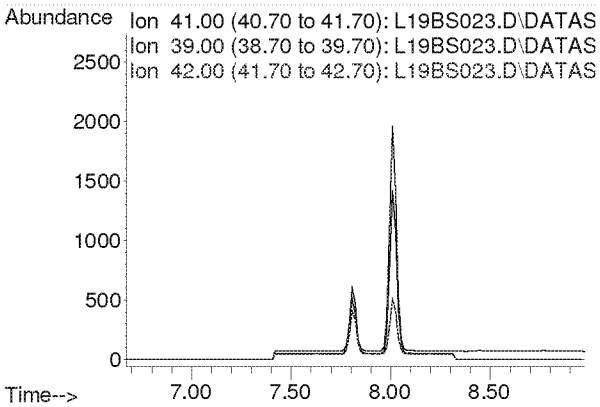


#3
Propylene
Concen: N.D.
Expected RT: 7.82 min

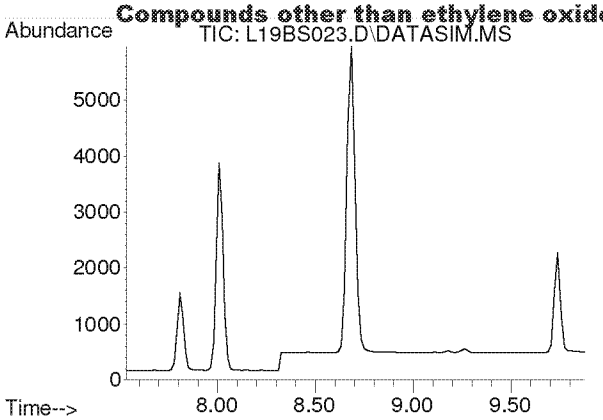
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
39	80.2
42	65.8



Compounds other than ethylene oxide were not quantitated.

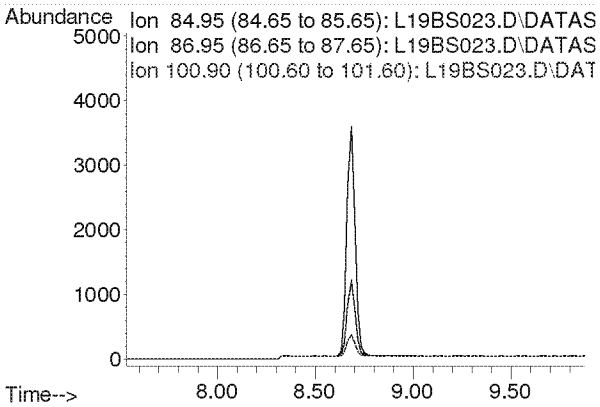


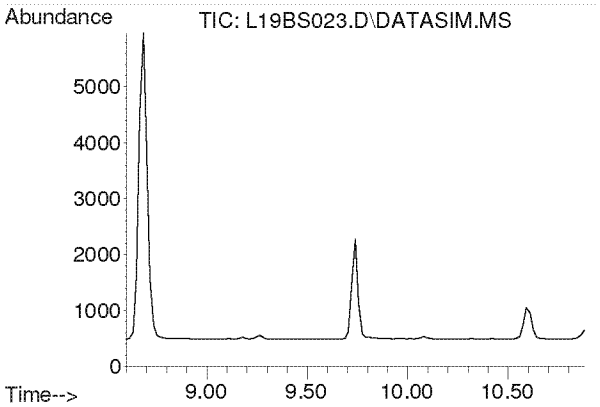
#4
Dichlorodifluoromethane
Concen: N.D.
Expected RT: 8.69 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
87	32.5
101	9.1



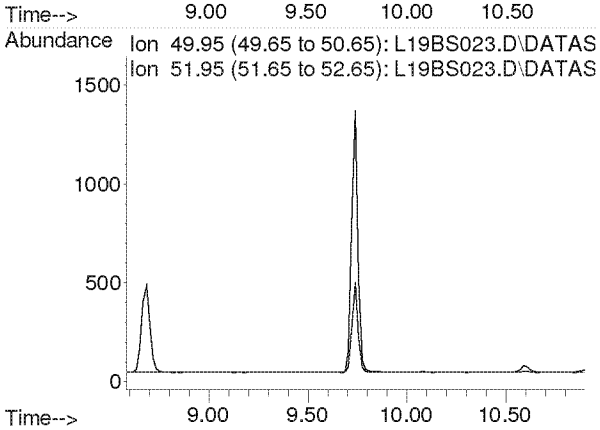


#5
Chloromethane
Concen: N.D.
Expected RT: 9.74 min

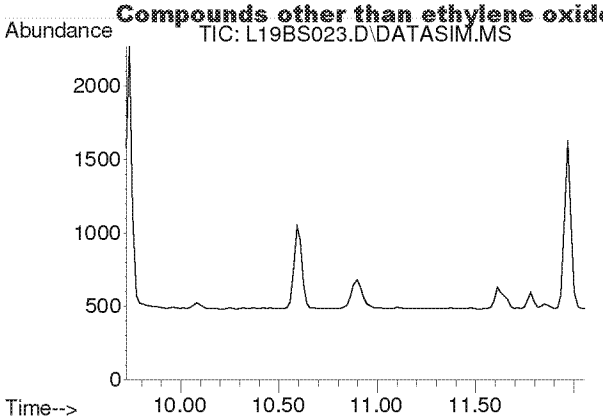
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 50

Sig	Exp Ratio
50	100
52	32.6



Compounds other than ethylene oxide were not quantitated.

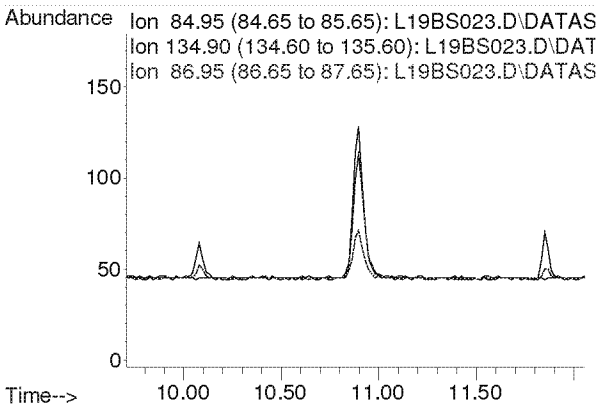


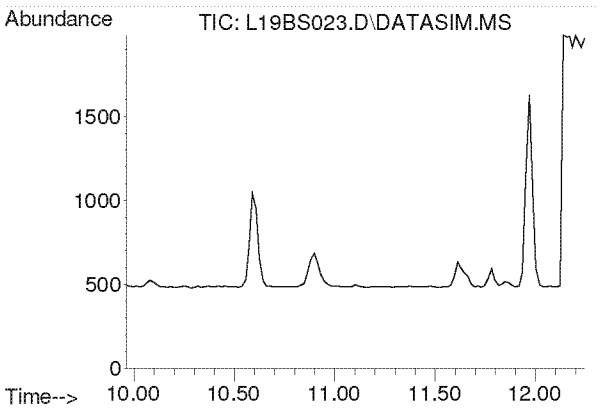
#6
Dichlorotetrafluoroethane
Concen: N.D.
Expected RT: 10.86 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
135	79.0
87	32.4



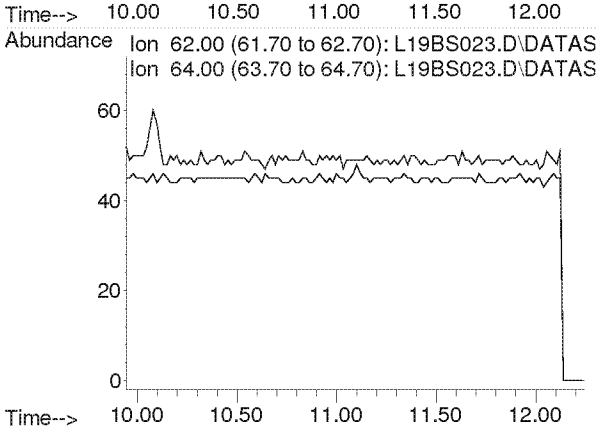


#7
Vinyl Chloride
Concen: N.D.
Expected RT: 11.10 min

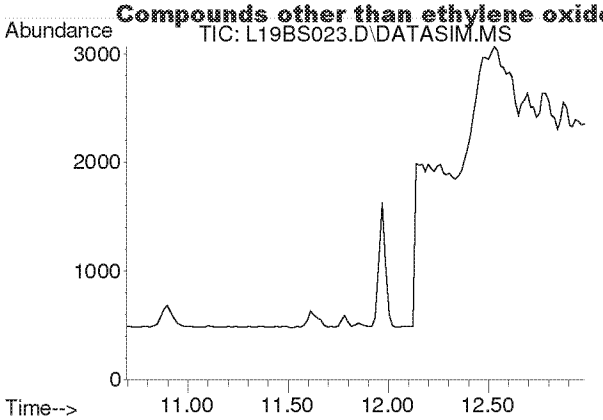
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	31.7



Compounds other than ethylene oxide were not quantitated.

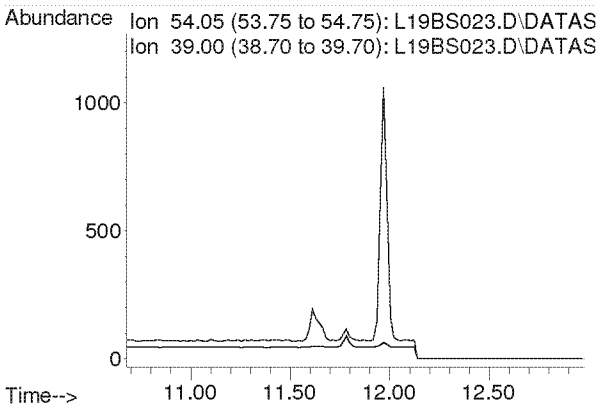


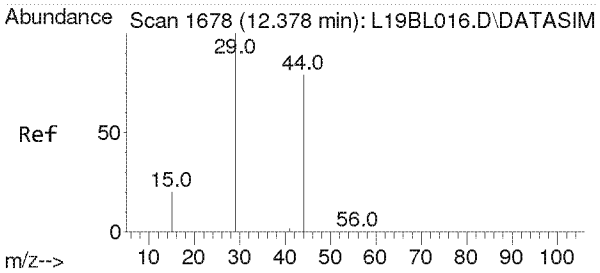
#8
1,3-Butadiene
Concen: N.D.
Expected RT: 11.78 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 54

Sig	Exp Ratio
54	100
39	102.0

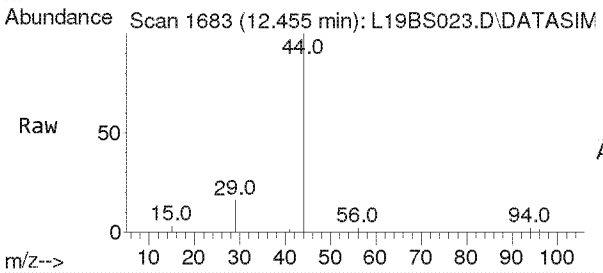


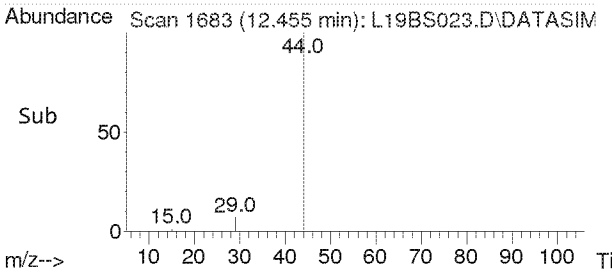


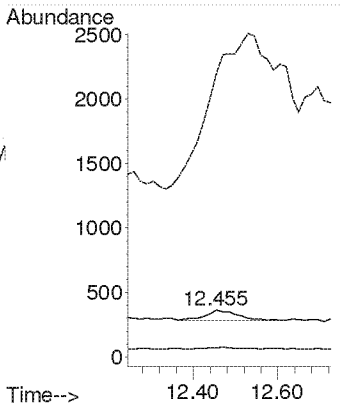
#9
Ethylene oxide
Concen: 0.171 ppbv
RT: 12.455 min Scan# 1683
Delta R.T. 0.005 min
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 29 Resp: 391

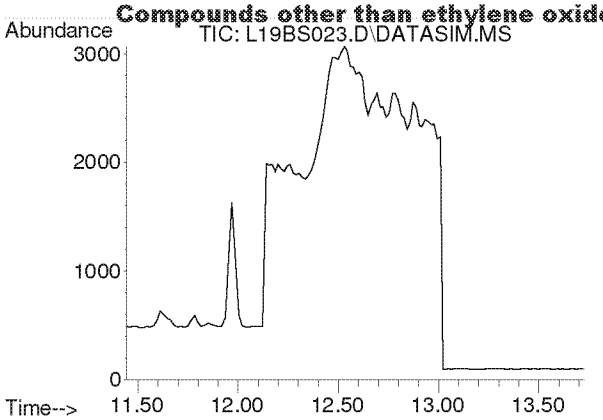
Ion	Ratio	Lower	Upper
29	100		
15	16.9	16.0	24.0
44	0.0	65.4	98.2#







Compounds other than ethylene oxide were not quantitated.

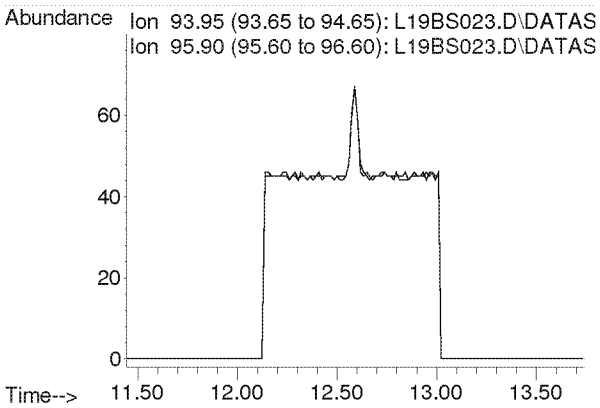


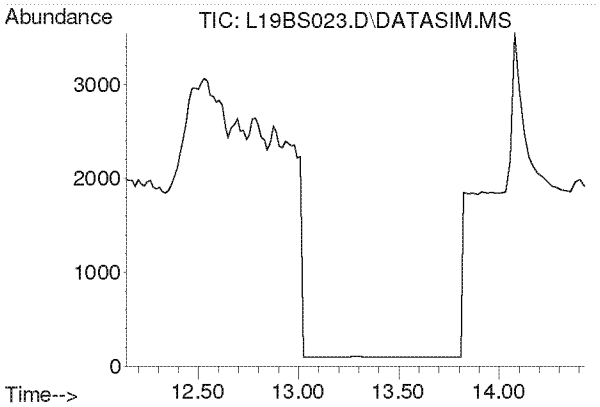
#10
Bromomethane
Concen: N.D.
Expected RT: 12.59 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 94

Sig	Exp Ratio
94	100
96	94.4



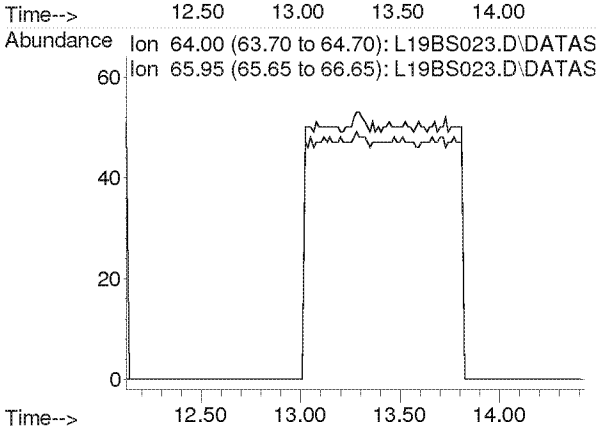


#11
Chloroethane
Concen: N.D.
Expected RT: 13.28 min

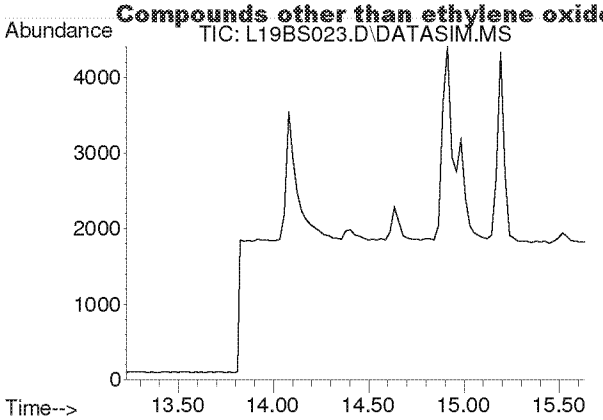
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



Compounds other than ethylene oxide were not quantitated.

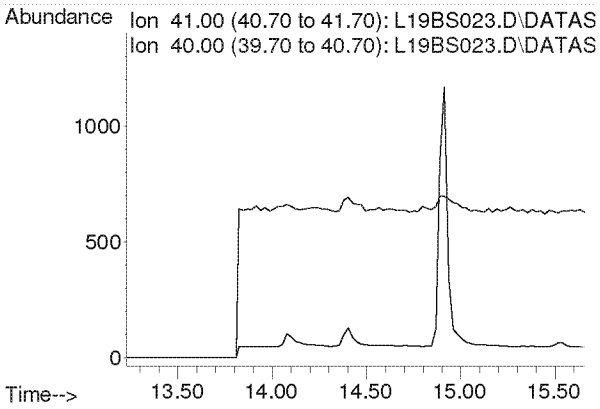


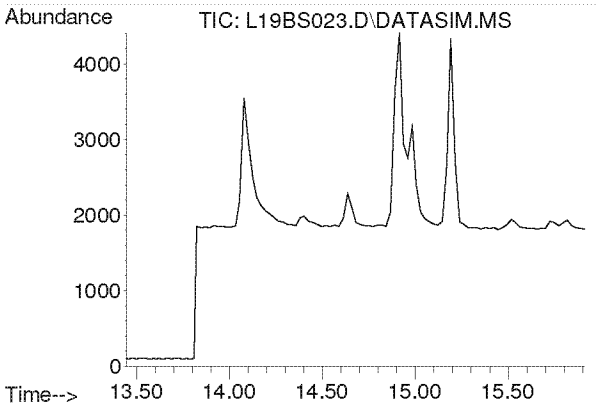
#12
Acetonitrile
Concen: N.D.
Expected RT: 14.36 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
40	52.8



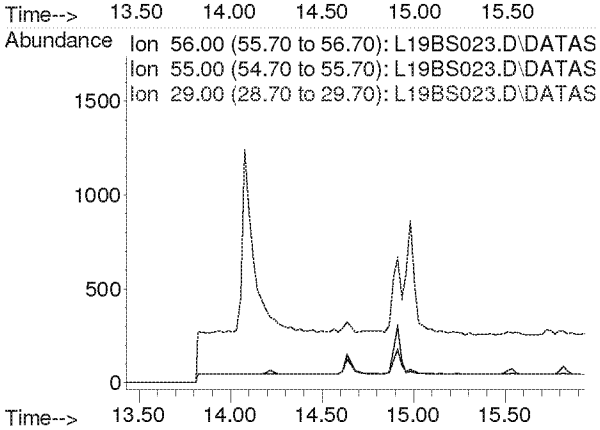


#13
Acrolein
Concen: N.D.
Expected RT: 14.63 min

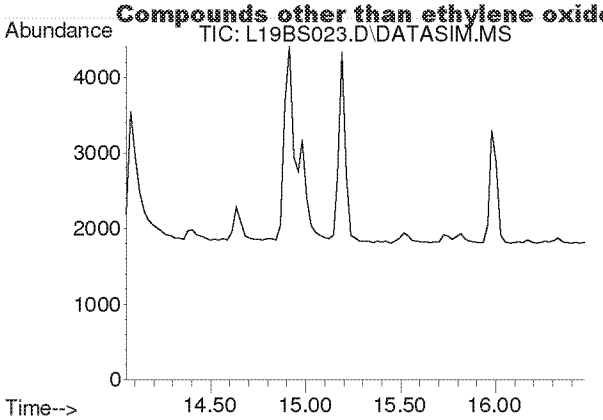
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 56

Sig	Exp Ratio
56	100
55	76.0
29	54.7



Compounds other than ethylene oxide were not quantitated.

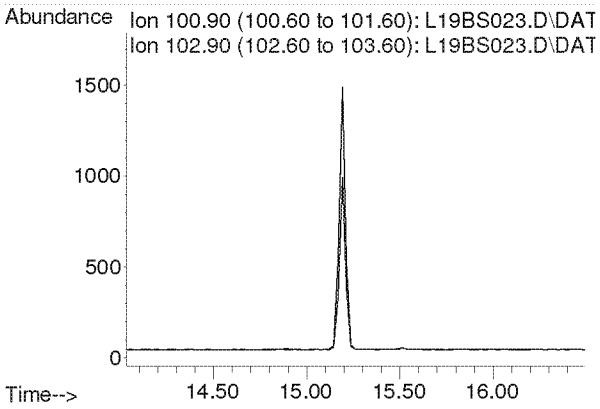


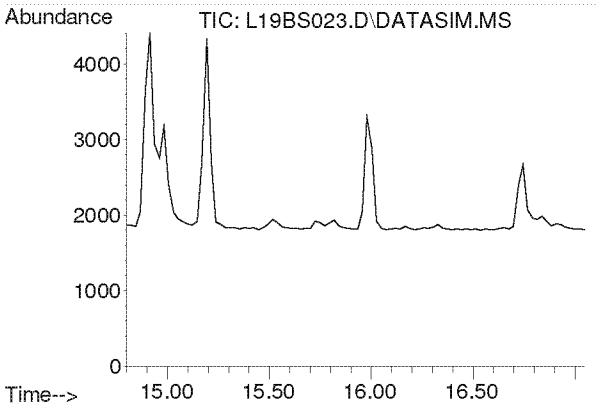
#14
Trichlorofluoromethane
Concen: N.D.
Expected RT: 15.19 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
103	64.6



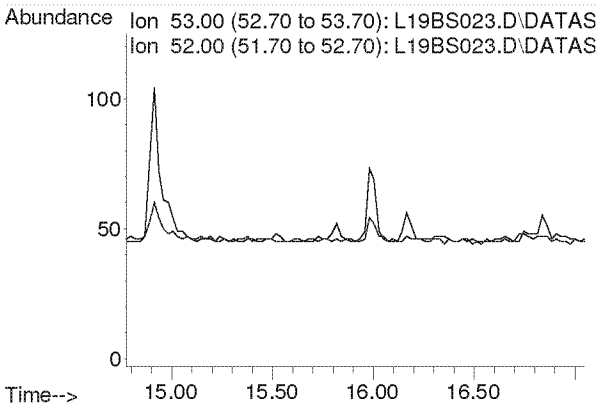


#15
Acrylonitrile
Concen: N.D.
Expected RT: 15.93 min

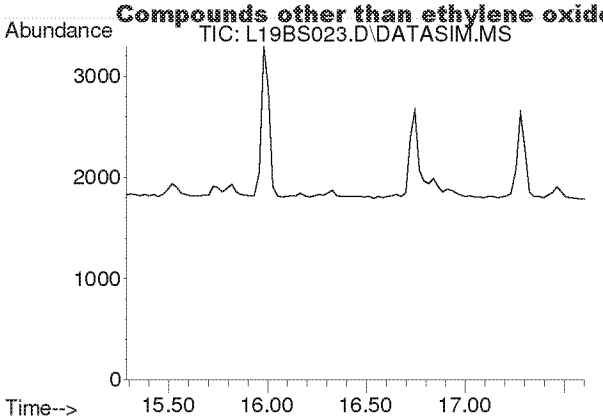
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
52	86.9



Compounds other than ethylene oxide were not quantitated.

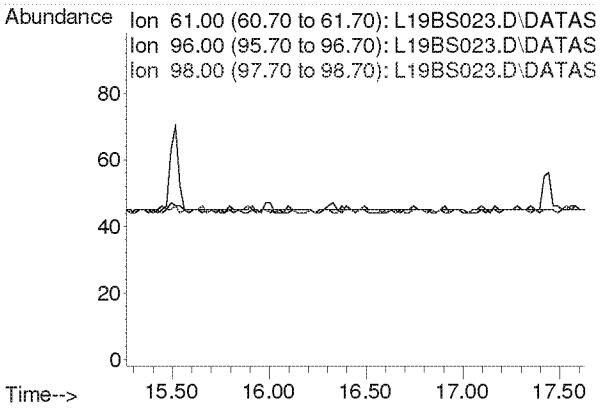


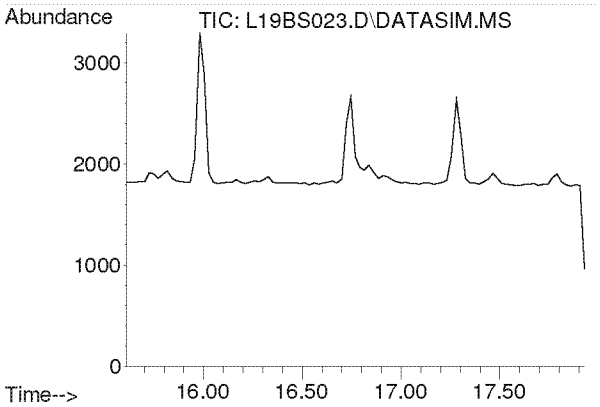
#16
1,1-Dichloroethene
Concen: N.D.
Expected RT: 16.42 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	59.1
98	38.2



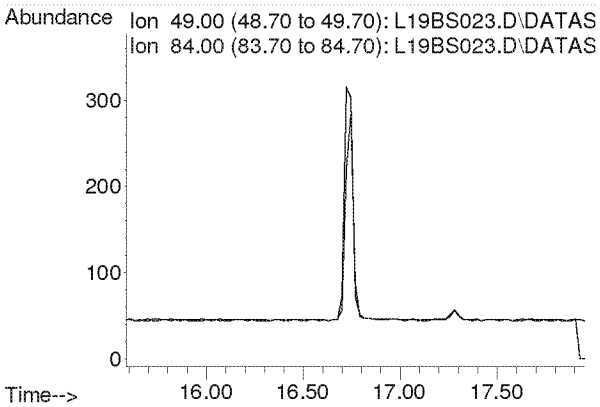


#17
Methylene Chloride
Concen: N.D.
Expected RT: 16.74 min

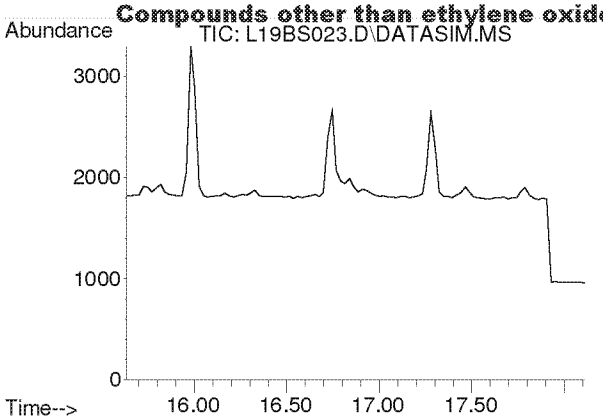
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 49

Sig	Exp Ratio
49	100
84	77.2



Compounds other than ethylene oxide were not quantitated.

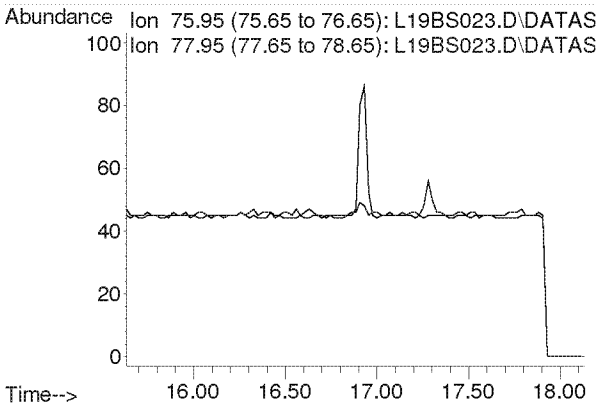


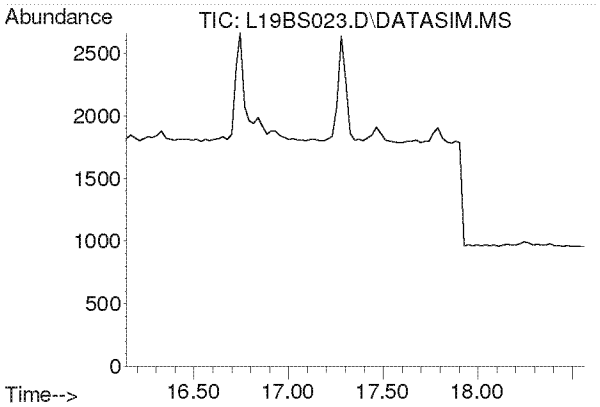
#18
Carbon Disulfide
Concen: N.D.
Expected RT: 16.93 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 76

Sig	Exp Ratio
76	100
78	9.2



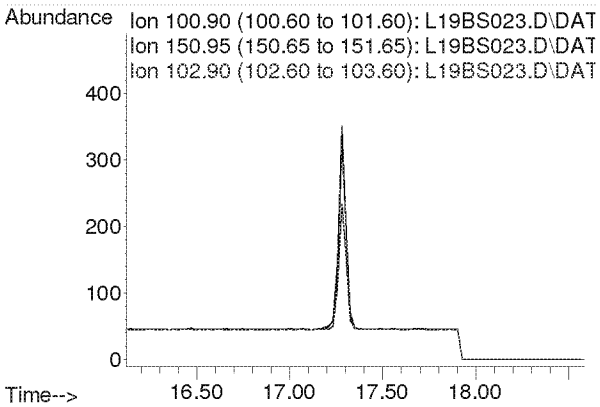


#19
Trichlorotrifluoroethane
Concen: N.D.
Expected RT: 17.28 min

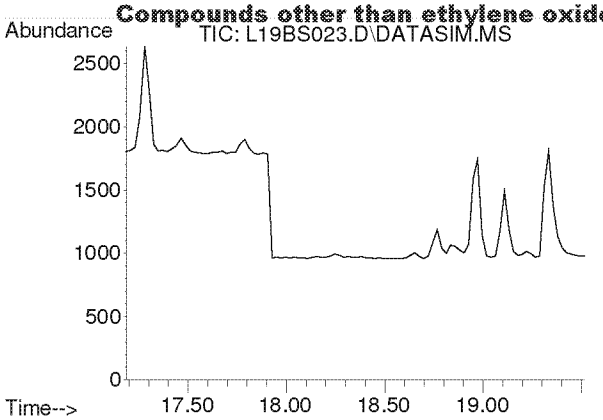
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
151	94.8
103	63.9



Compounds other than ethylene oxide were not quantitated.

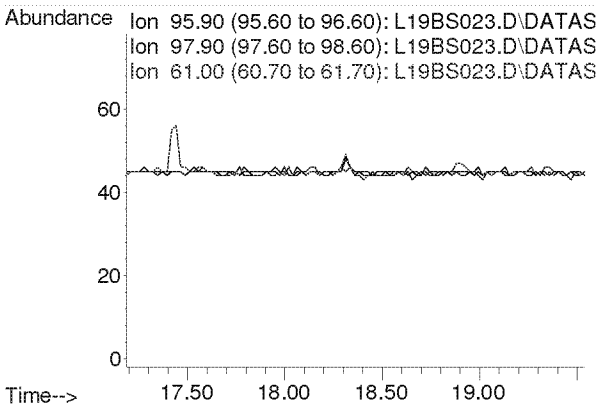


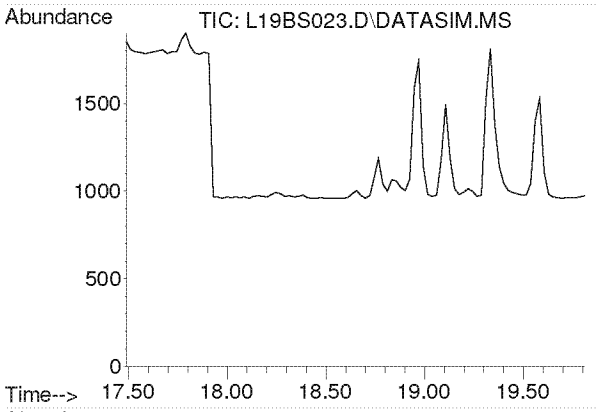
#20
trans-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 18.34 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 96

Sig	Exp Ratio
96	100
98	64.4
61	153.6



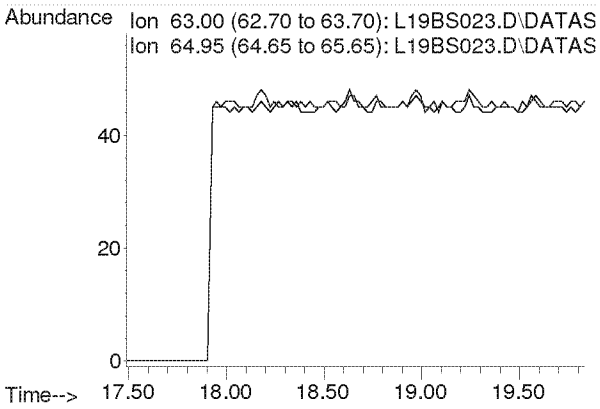


#21
1,1-Dichloroethane
Concen: N.D.
Expected RT: 18.63 min

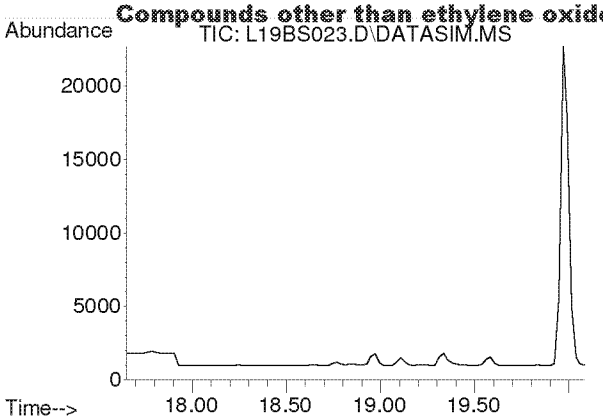
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
65	31.7



Compounds other than ethylene oxide were not quantitated.

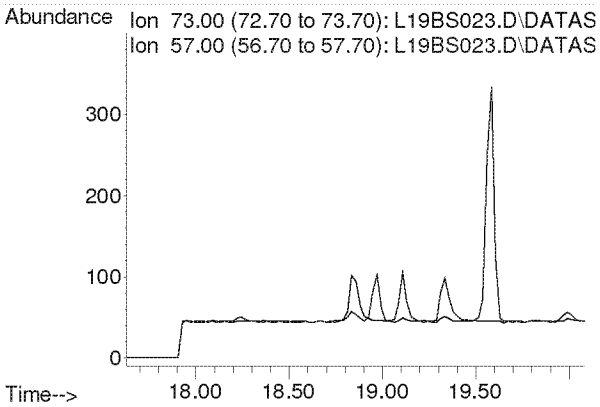


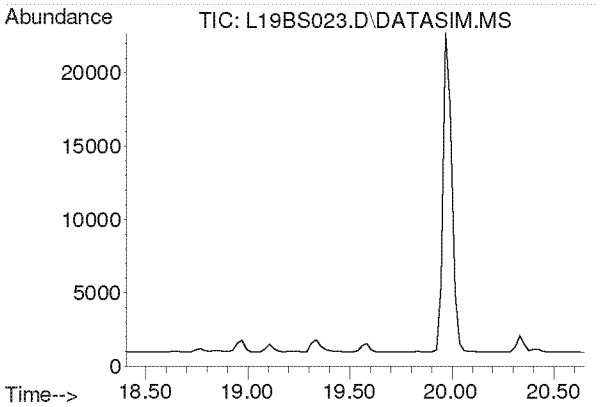
#22
Methyl tert-Butyl Ether
Concen: N.D.
Expected RT: 18.79 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
57	22.5



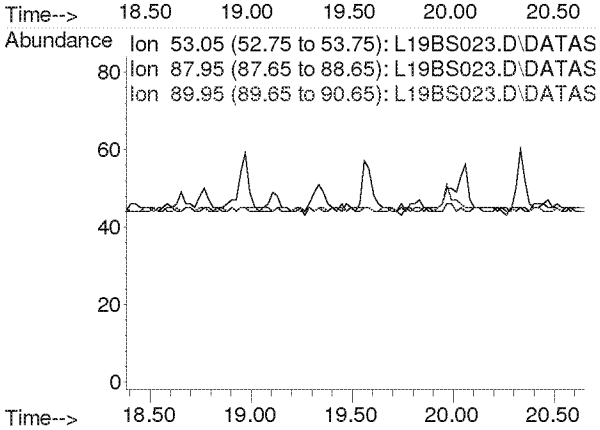


#23
Chloroprene
Concen: N.D.
Expected RT: 19.54 min

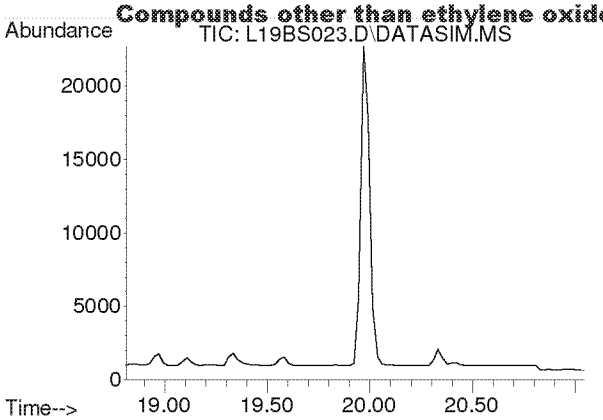
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	53.3
90	17.4



Compounds other than ethylene oxide were not quantitated.

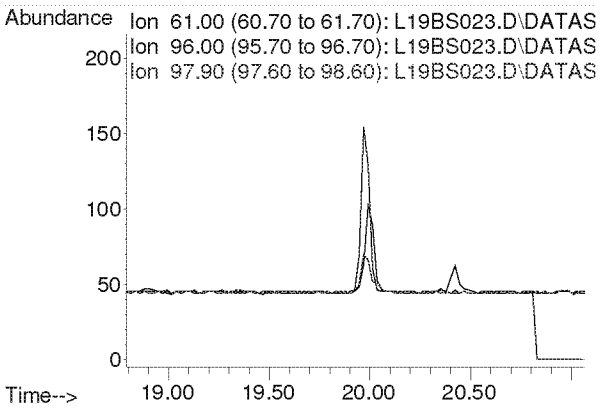


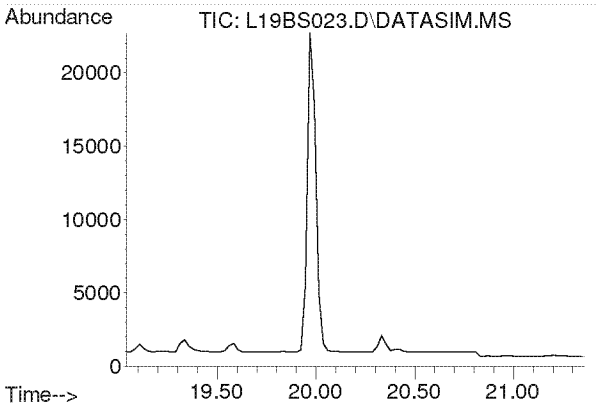
#24
cis-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 19.95 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	73.8
98	47.0



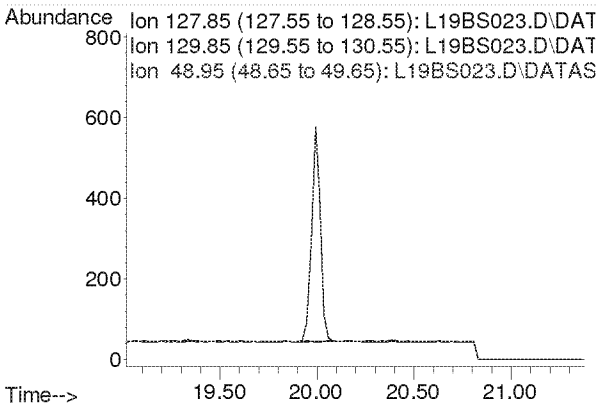


#25
Bromochloromethane
Concen: N.D.
Expected RT: 20.17 min

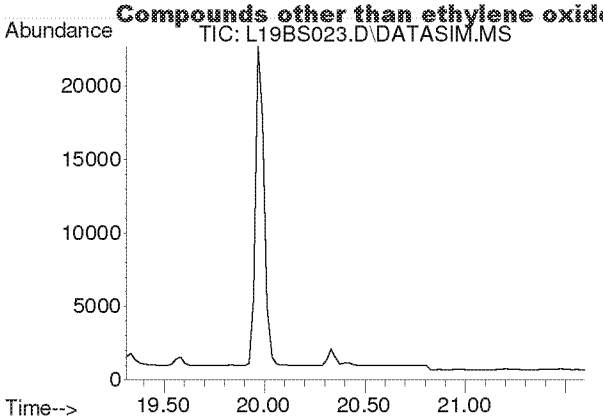
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 128

Sig	Exp Ratio
128	100
130	129.1
49	160.4



Compounds other than ethylene oxide were not quantitated.

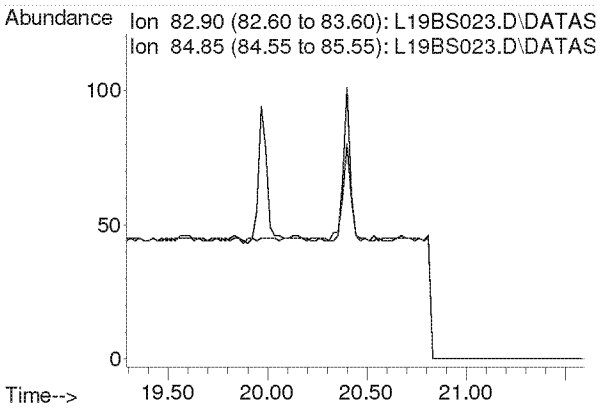


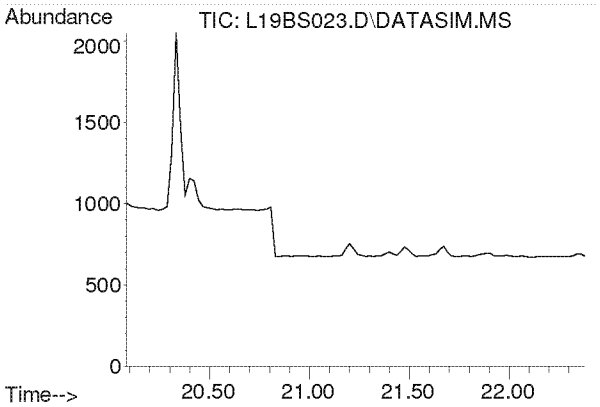
#26
Chloroform
Concen: N.D.
Expected RT: 20.40 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.4



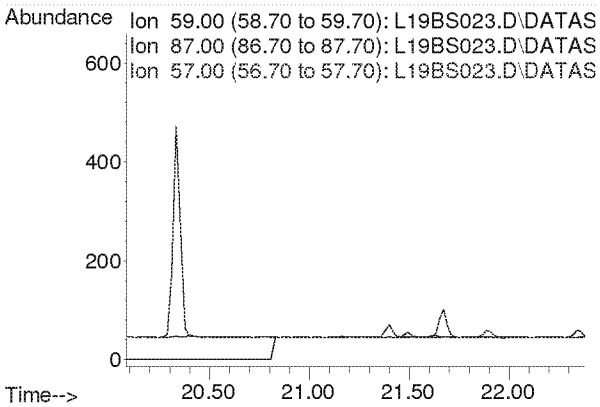


#27
Ethyl tert-Butyl Ether
Concen: N.D.
Expected RT: 21.18 min

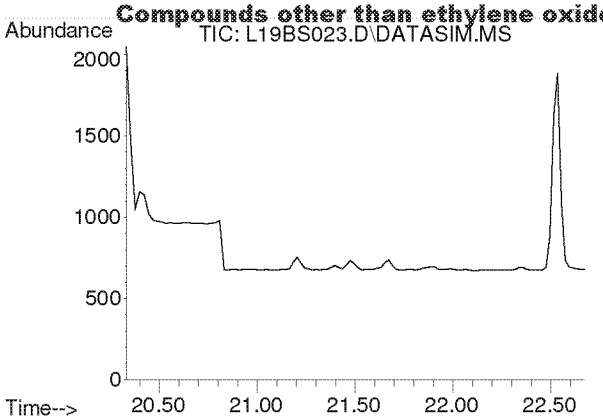
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 59

Sig	Exp Ratio
59	100
87	39.4
57	33.2



Compounds other than ethylene oxide were not quantitated.

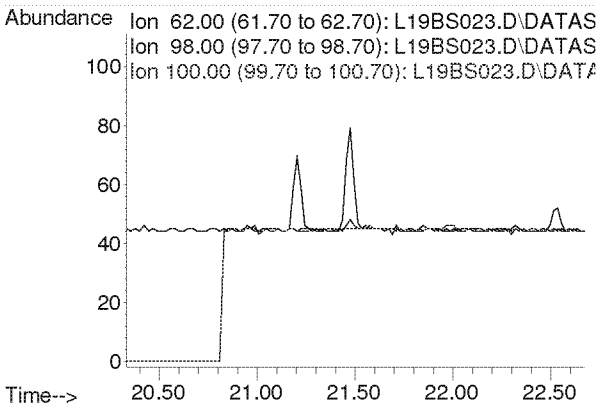


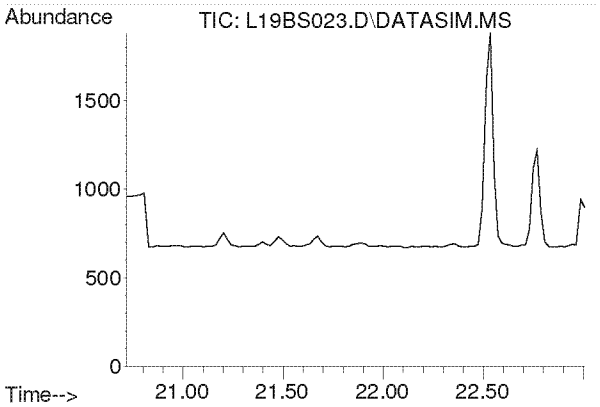
#28
1,2-Dichloroethane
Concen: N.D.
Expected RT: 21.48 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
98	6.3
100	4.0



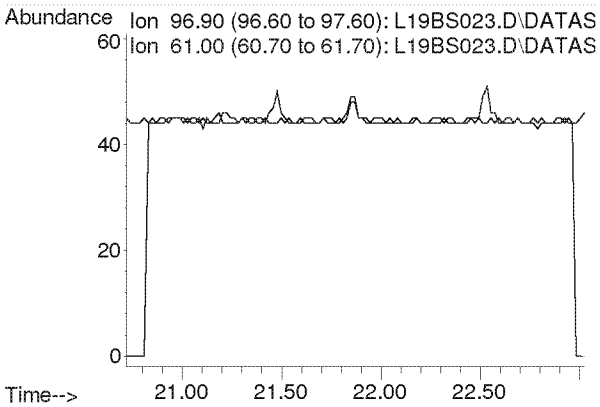


#30
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 21.87 min

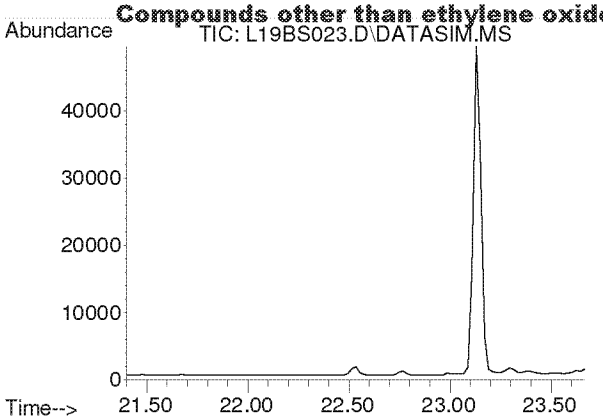
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
61	62.1



Compounds other than ethylene oxide were not quantitated.

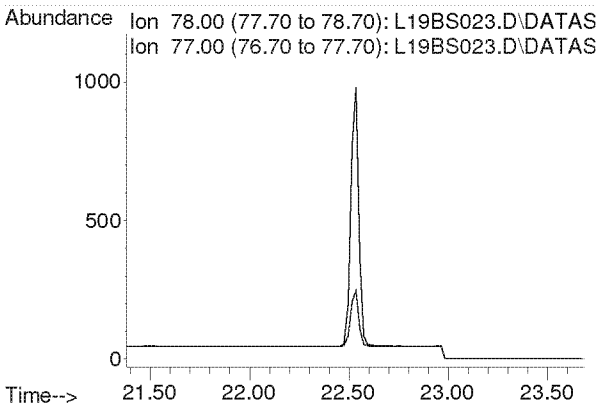


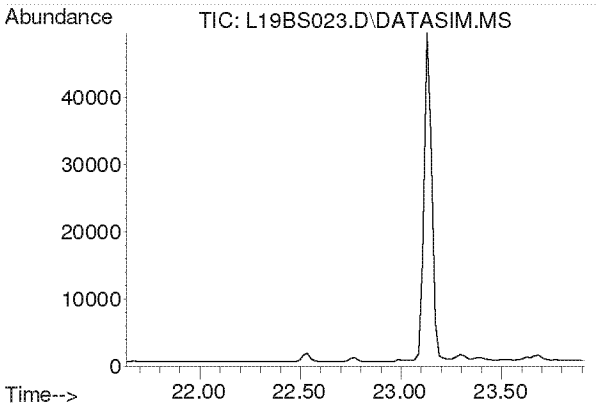
#31
Benzene
Concen: N.D.
Expected RT: 22.53 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 78

Sig	Exp Ratio
78	100
77	22.8



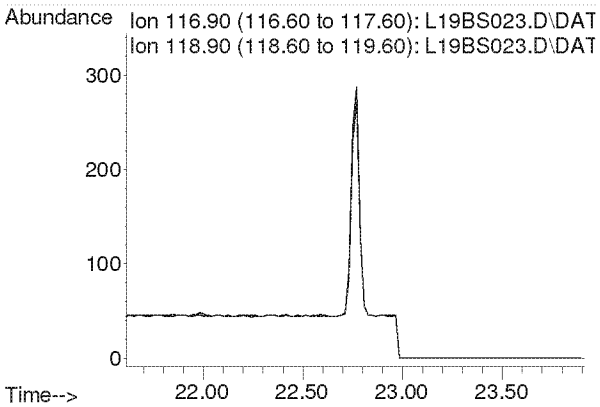


#32
Carbon Tetrachloride
Concen: N.D.
Expected RT: 22.77 min

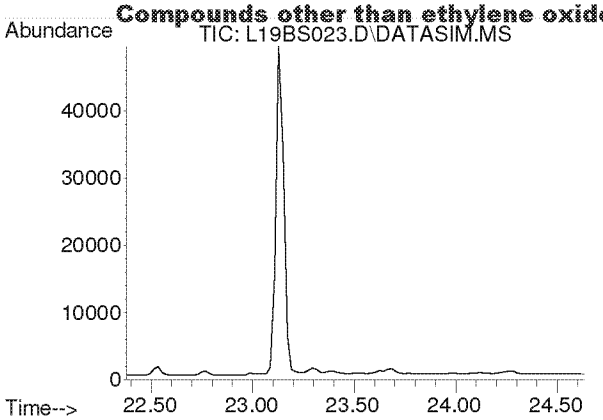
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 117

Sig	Exp Ratio
117	100
119	96.3



Compounds other than ethylene oxide were not quantitated.

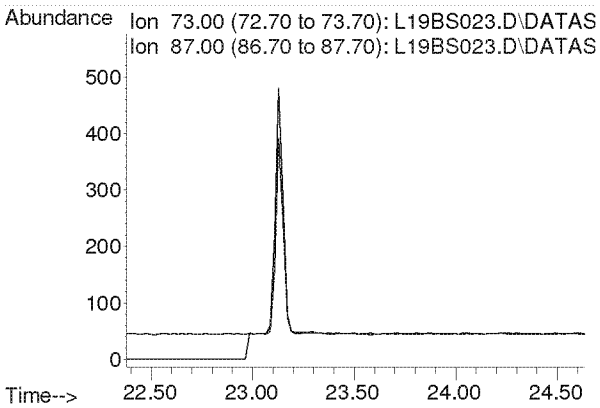


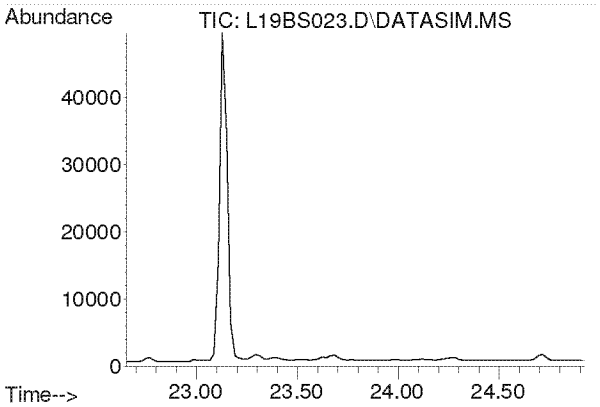
#33
tert-Amyl Methyl Ether
Concen: N.D.
Expected RT: 23.52 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
87	25.1



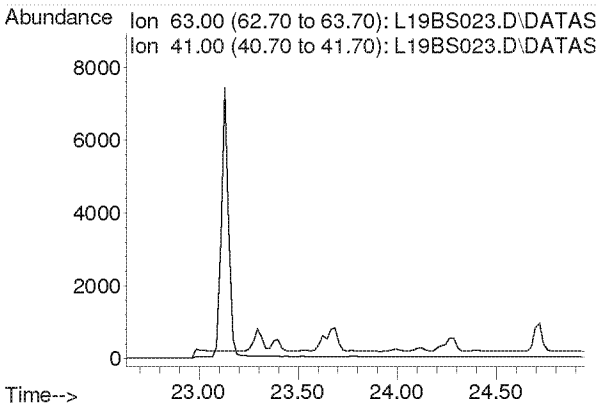


#34
1,2-Dichloropropane
Concen: N.D.
Expected RT: 23.79 min

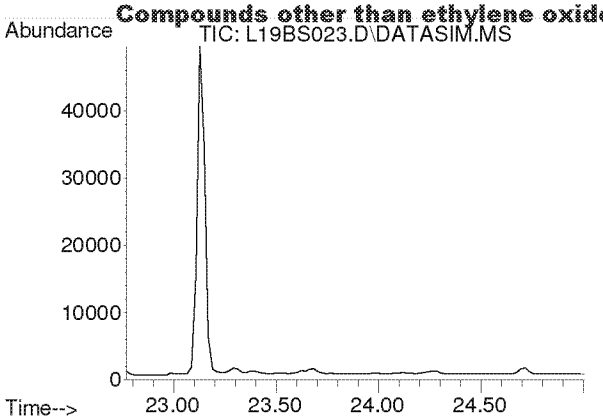
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	219.9



Compounds other than ethylene oxide were not quantitated.

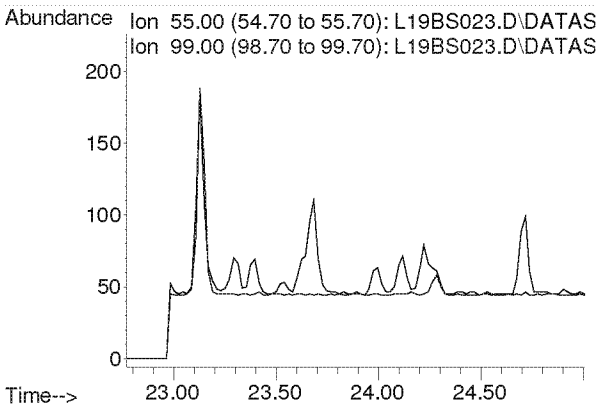


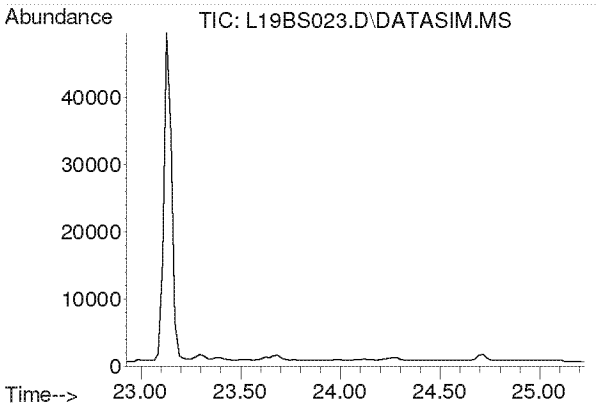
#35
Ethyl Acrylate
Concen: N.D.
Expected RT: 23.89 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
99	6.3



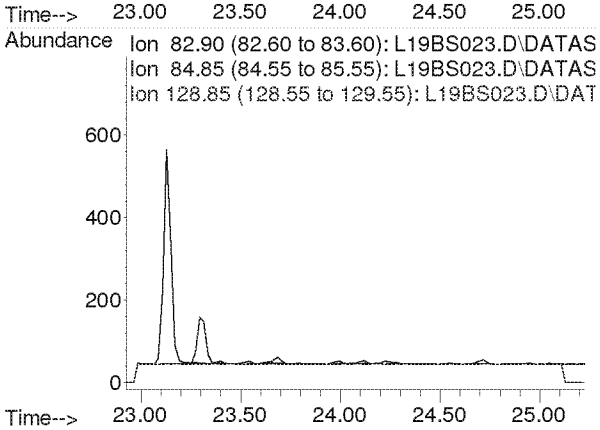


#36
Bromodichloromethane
Concen: N.D.
Expected RT: 24.08 min

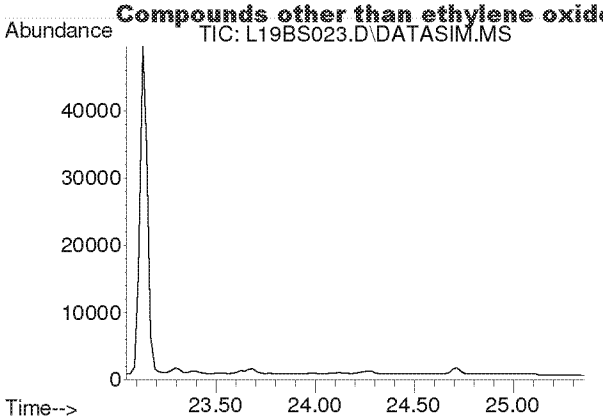
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.7
129	12.4



Compounds other than ethylene oxide were not quantitated.

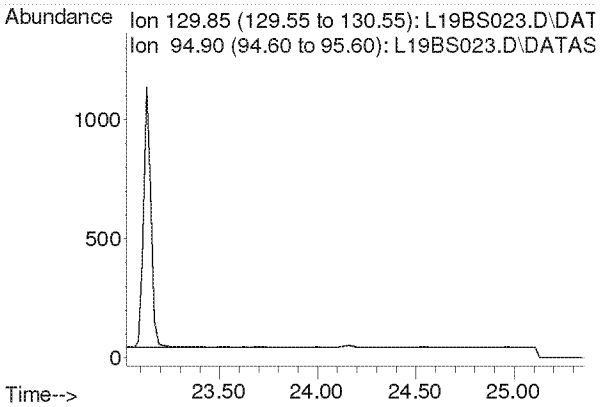


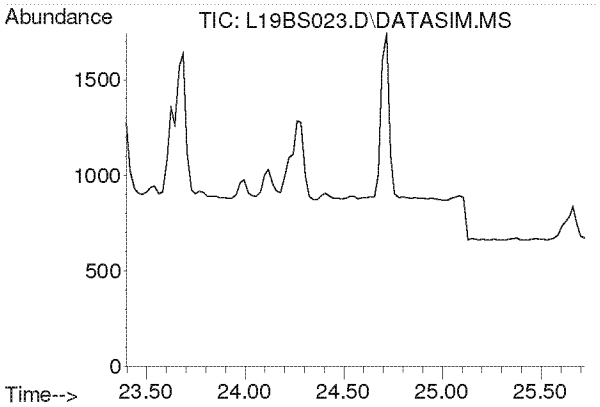
#37
Trichloroethylene
Concen: N.D.
Expected RT: 24.18 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 130

Sig	Exp Ratio
130	100
95	106.1



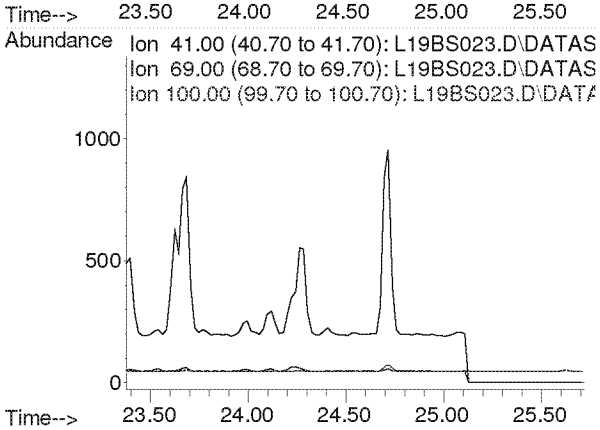


#38
Methyl Methacrylate
Concen: N.D.
Expected RT: 24.53 min

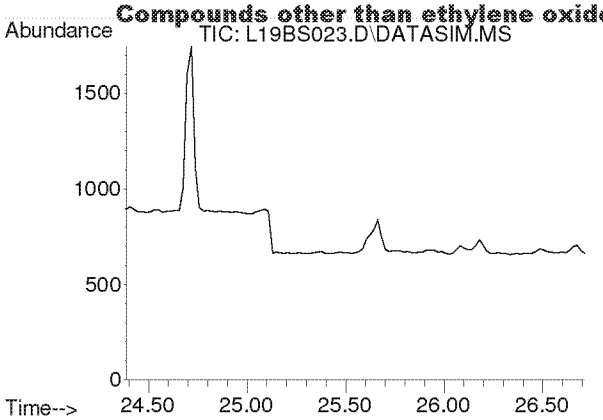
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
69	21.0
100	5.6



Compounds other than ethylene oxide were not quantitated.

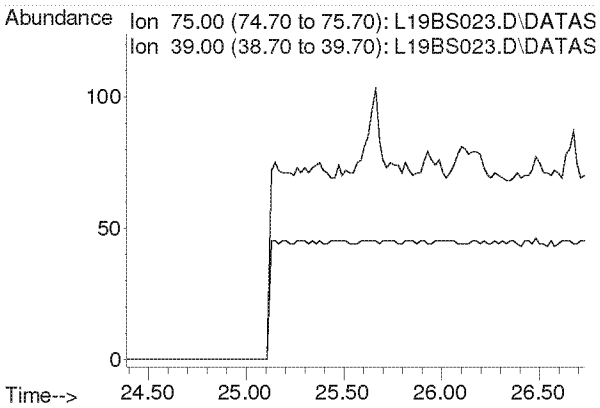


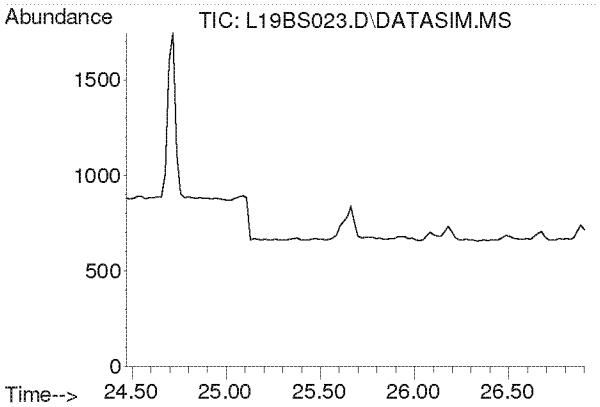
#39
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 25.53 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	54.2



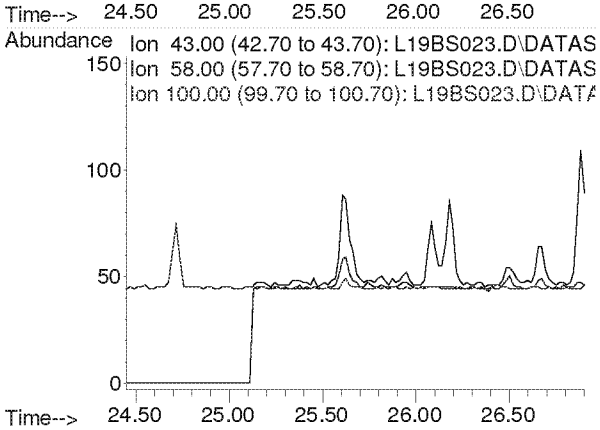


#40
Methyl Isobutyl Ketone
Concen: N.D.
Expected RT: 25.60 min

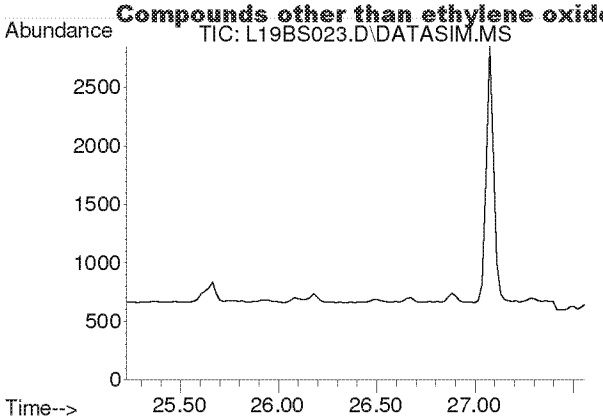
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	35.0
100	8.7



Compounds other than ethylene oxide were not quantitated.

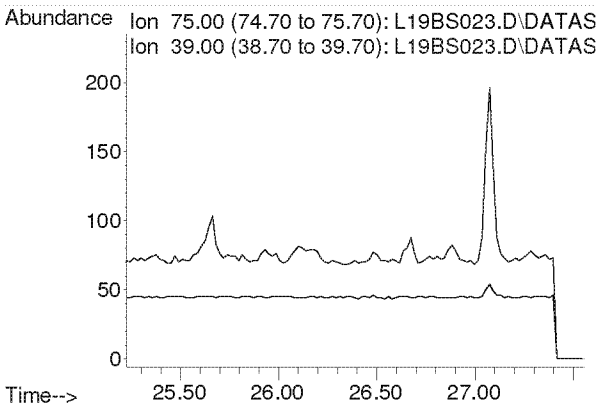


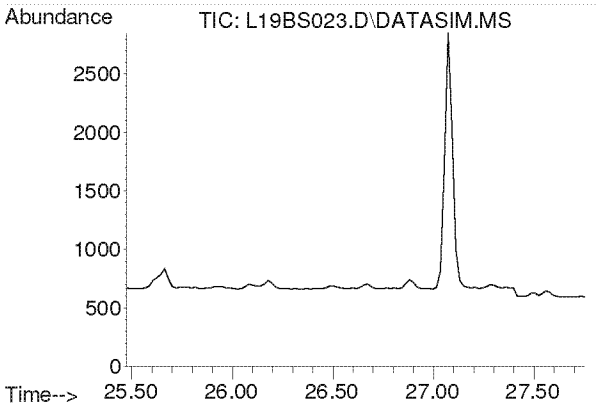
#41
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 26.37 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	53.6



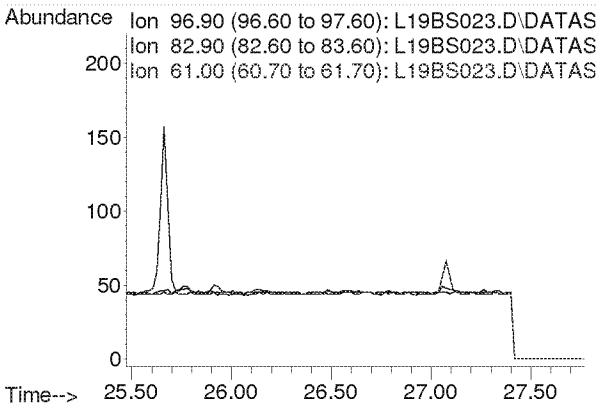


#42
1,1,2-Trichloroethane
Concen: N.D.
Expected RT: 26.62 min

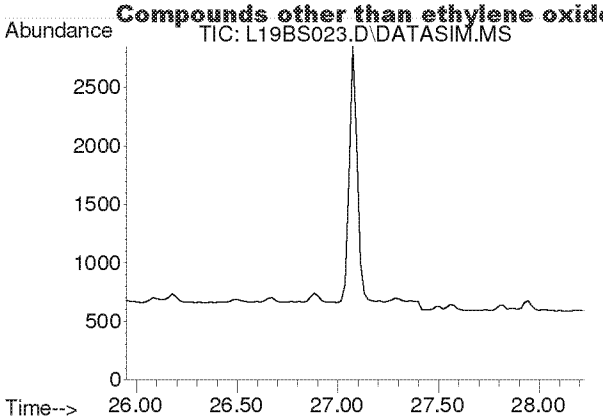
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
83	94.2
61	62.2



Compounds other than ethylene oxide were not quantitated.

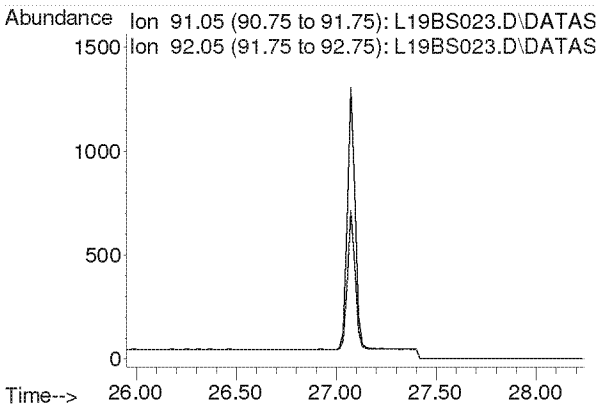


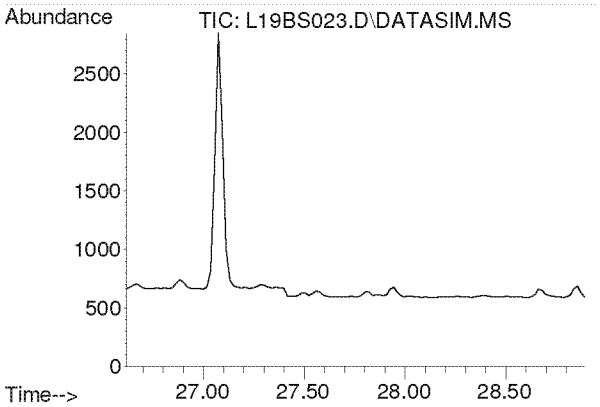
#44
Toluene
Concen: N.D.
Expected RT: 27.09 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	52.5



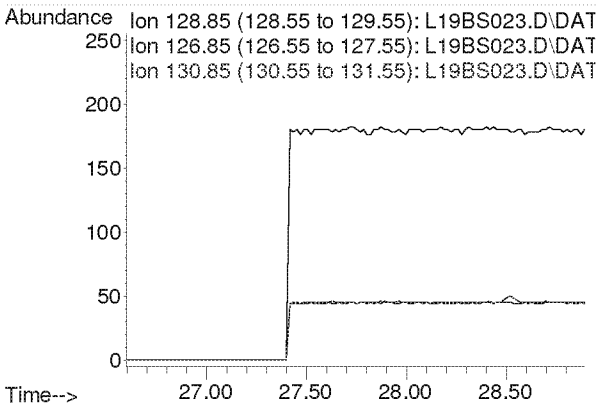


#45
Dibromochloromethane
Concen: N.D.
Expected RT: 27.75 min

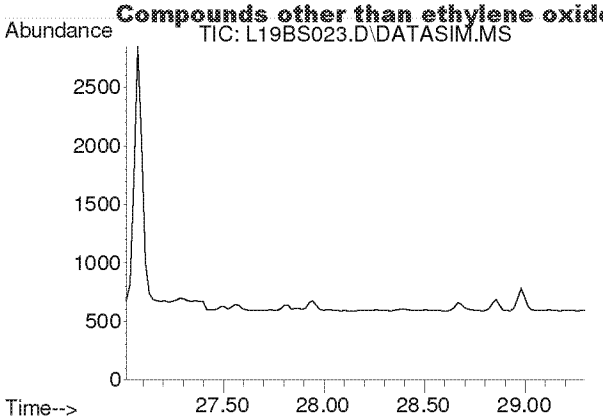
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 129

Sig	Exp Ratio
129	100
127	19.3
131	6.0



Compounds other than ethylene oxide were not quantitated.

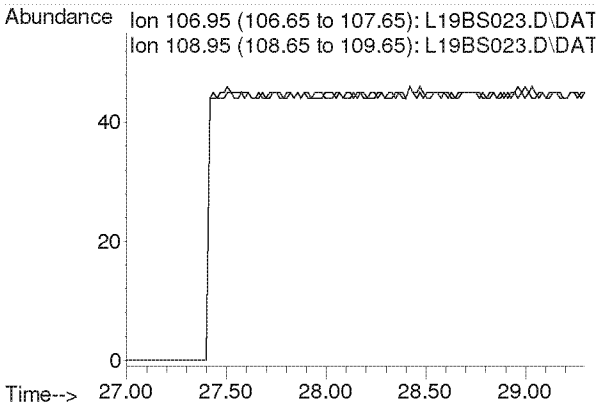


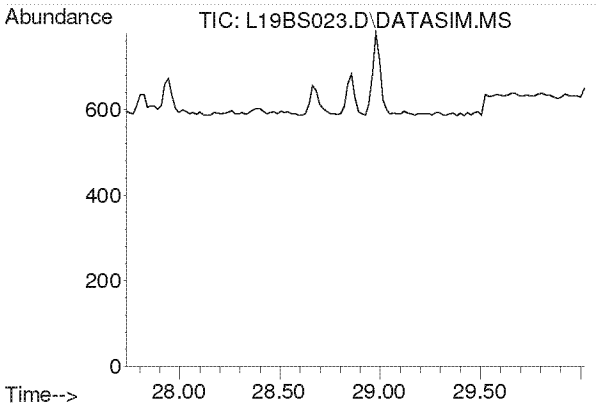
#46
1,2-Dibromoethane
Concen: N.D.
Expected RT: 28.15 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 107

Sig	Exp Ratio
107	100
109	94.2



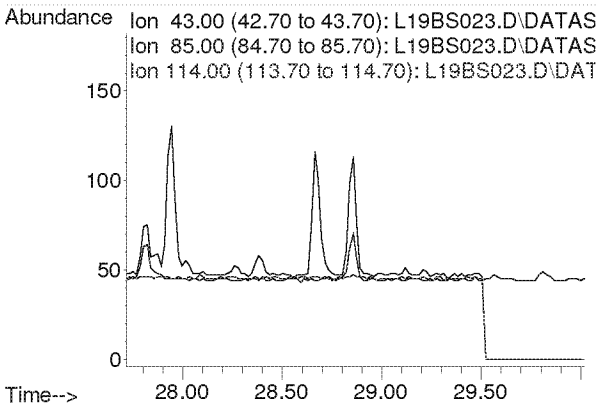


#47
n-Octane
Concen: N.D.
Expected RT: 28.87 min

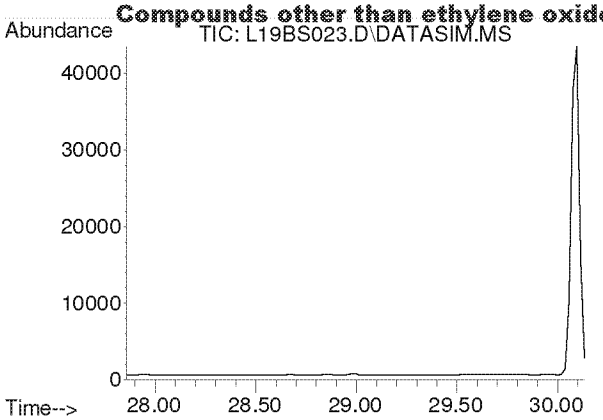
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
85	41.3
114	2.8



Compounds other than ethylene oxide were not quantitated.

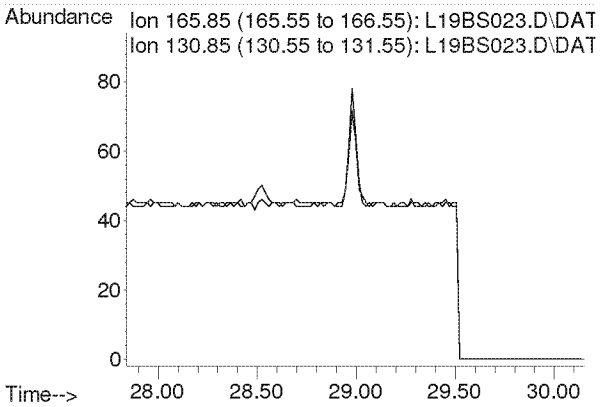


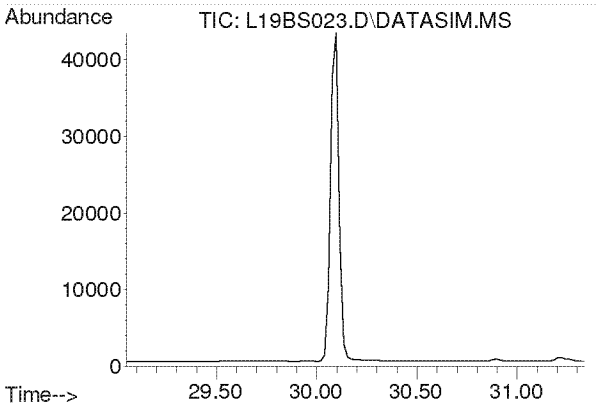
#48
Tetrachloroethylene
Concen: N.D.
Expected RT: 29.00 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 166

Sig	Exp Ratio
166	100
131	76.9



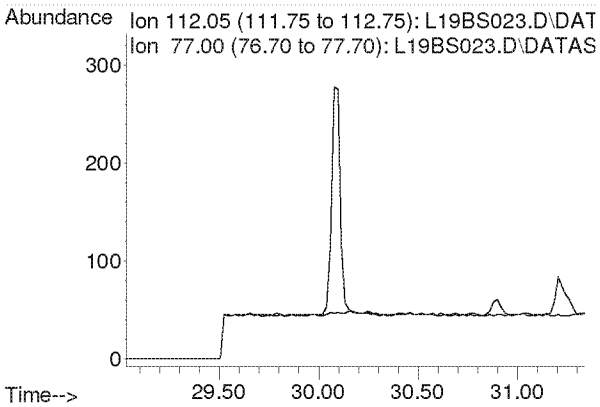


#49
Chlorobenzene
Concen: N.D.
Expected RT: 30.19 min

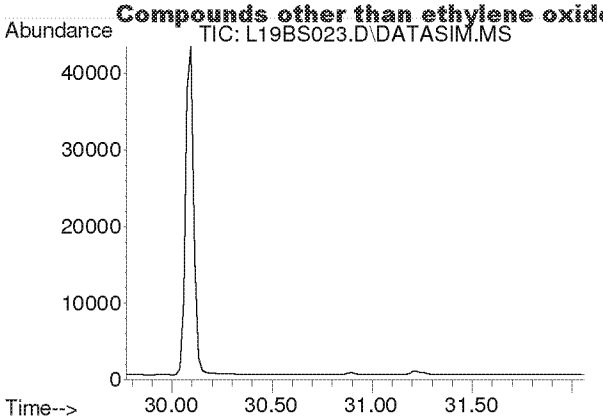
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 112

Sig	Exp Ratio
112	100
77	59.7



Compounds other than ethylene oxide were not quantitated.

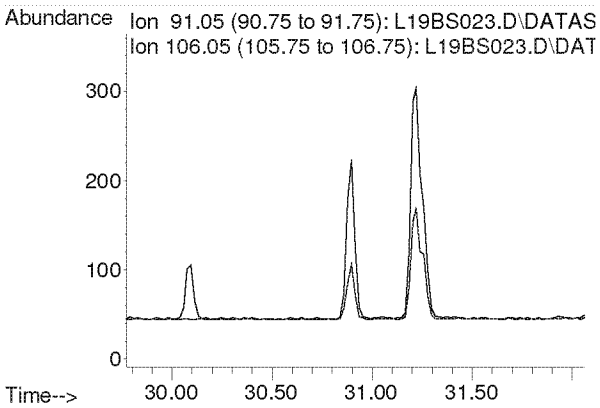


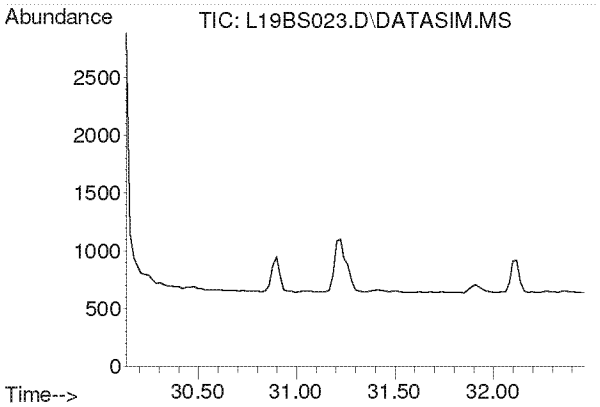
#50
Ethylbenzene
Concen: N.D.
Expected RT: 30.92 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	32.5



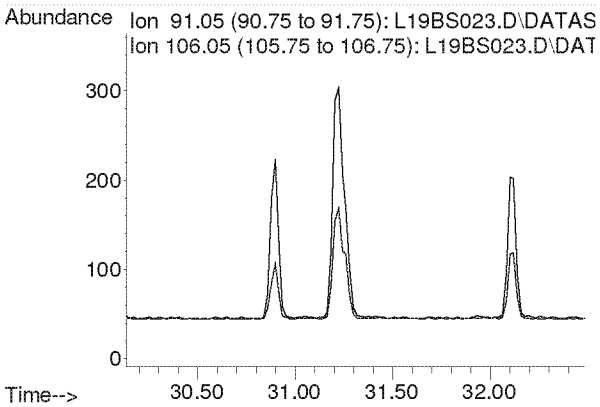


#51
m,p-Xylene
Concen: N.D.
Expected RT: 31.28 min

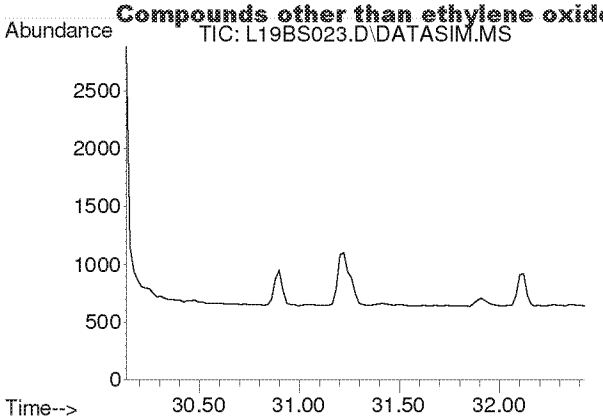
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	46.6



Compounds other than ethylene oxide were not quantitated.

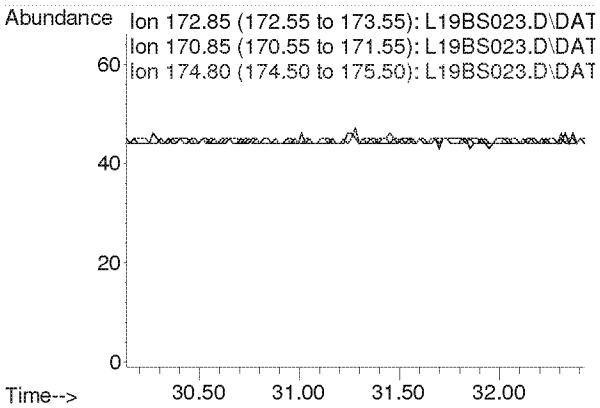


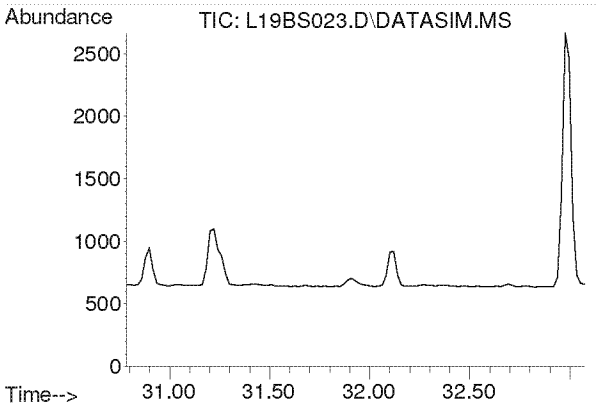
#52
Bromoform
Concen: N.D.
Expected RT: 31.28 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 173

Sig	Exp Ratio
173	100
171	51.3
175	48.9



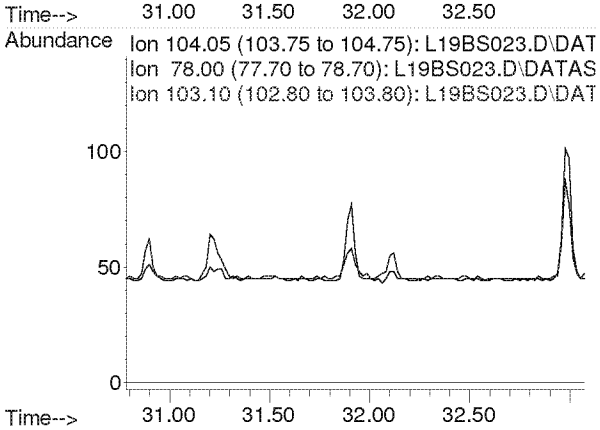


#53
Styrene
Concen: N.D.
Expected RT: 31.93 min

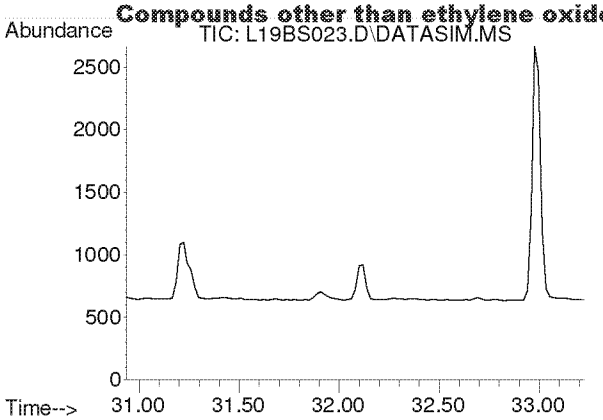
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 104

Sig	Exp Ratio
104	100
78	44.3
103	0.0



Compounds other than ethylene oxide were not quantitated.

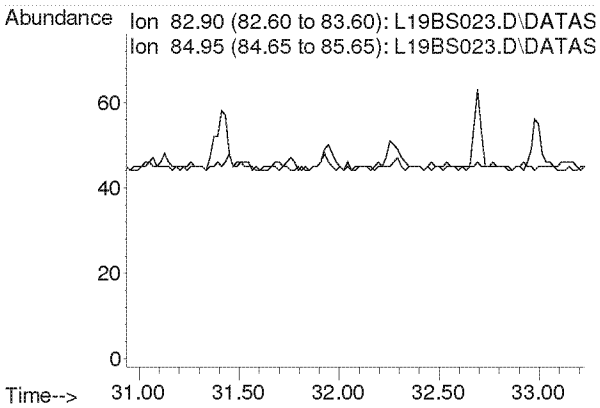


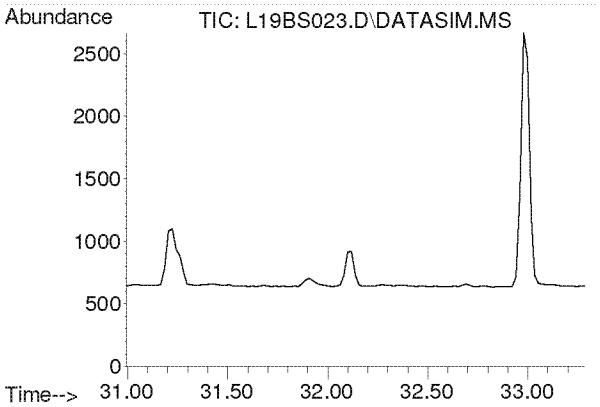
#54
1,1,2,2-Tetrachloroethane
Concen: N.D.
Expected RT: 32.08 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.5



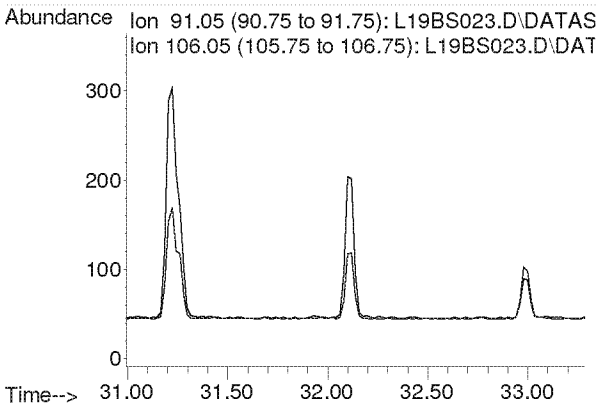


#55
o-Xylene
Concen: N.D.
Expected RT: 32.14 min

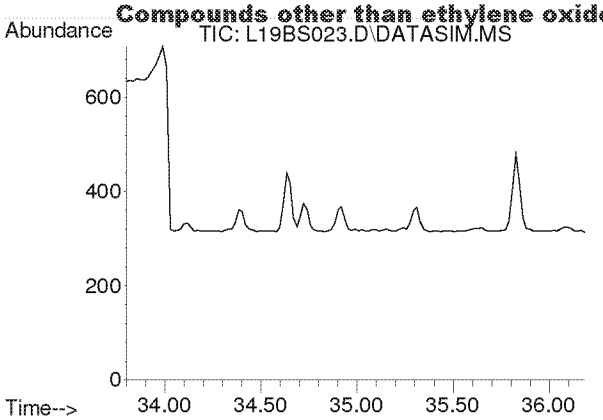
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	45.8



Compounds other than ethylene oxide were not quantitated.

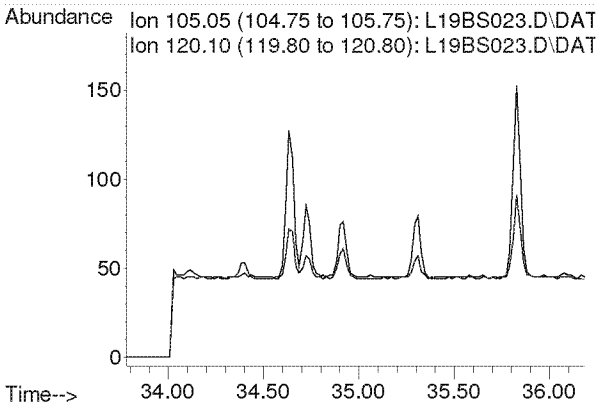


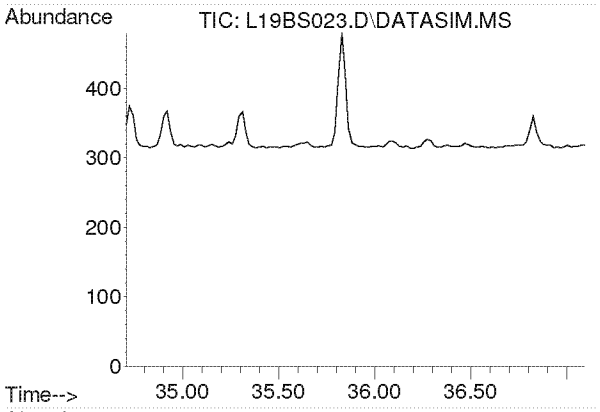
#56
1,3,5-Trimethylbenzene
Concen: N.D.
Expected RT: 34.94 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	46.0



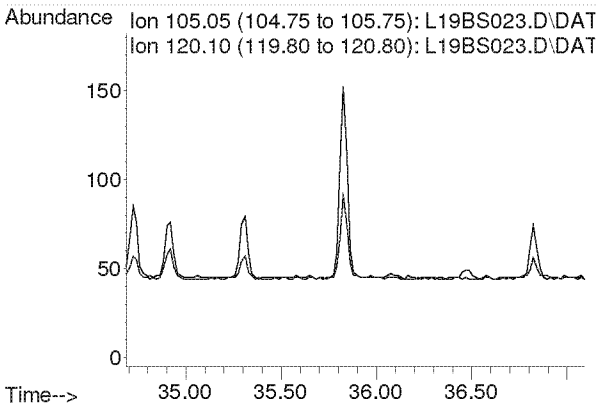


#57
1,2,4-Trimethylbenzene
Concen: N.D.
Expected RT: 35.85 min

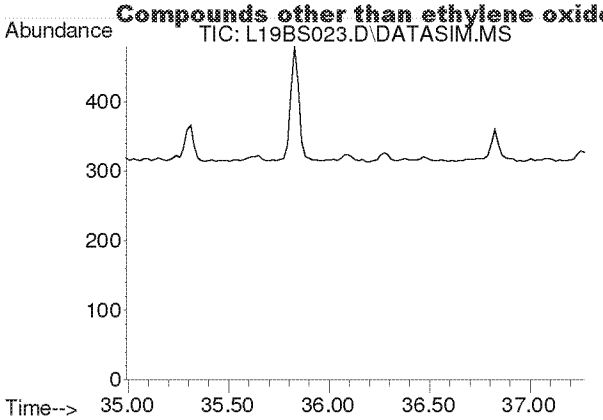
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	44.0



Compounds other than ethylene oxide were not quantitated.

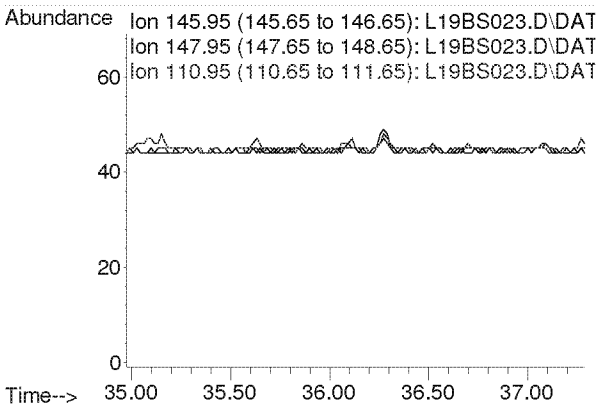


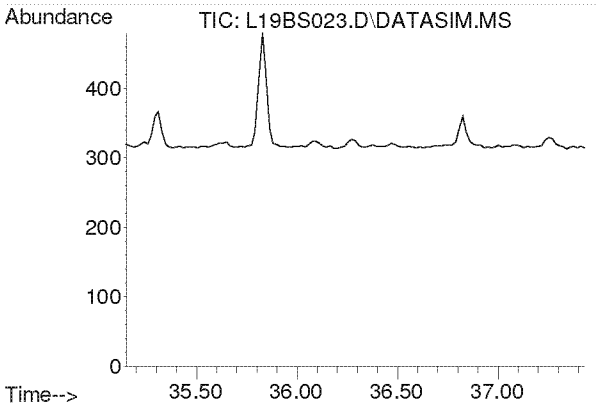
#58
m-Dichlorobenzene
Concen: N.D.
Expected RT: 36.13 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.1
111	40.1



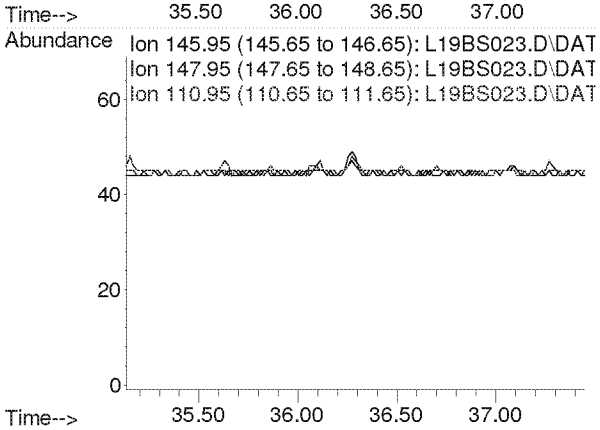


#59
p-Dichlorobenzene
Concen: N.D.
Expected RT: 36.29 min

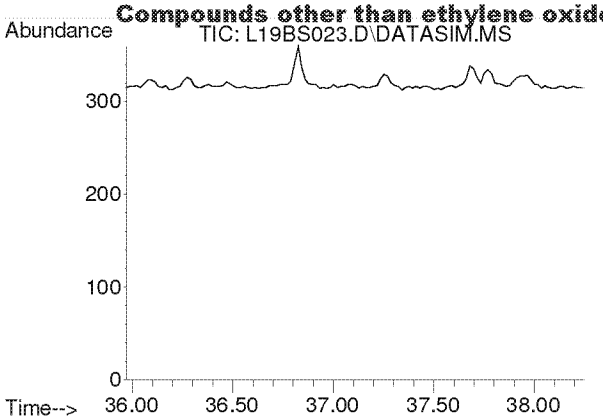
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.3
111	38.7



Compounds other than ethylene oxide were not quantitated.

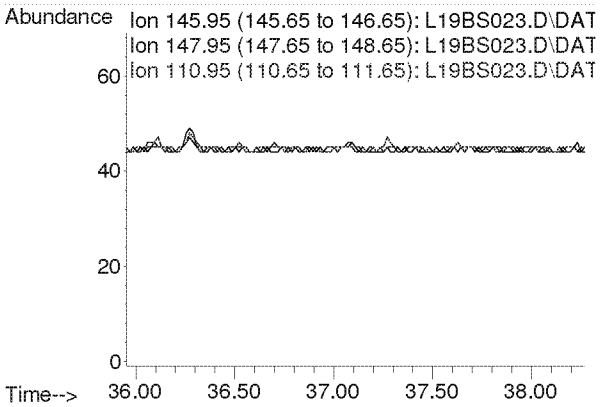


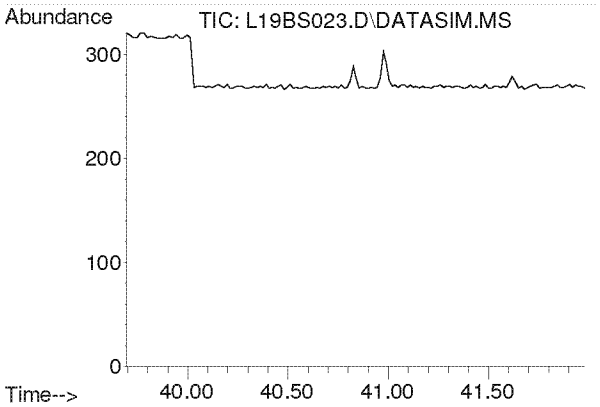
#60
o-Dichlorobenzene
Concen: N.D.
Expected RT: 37.11 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.8



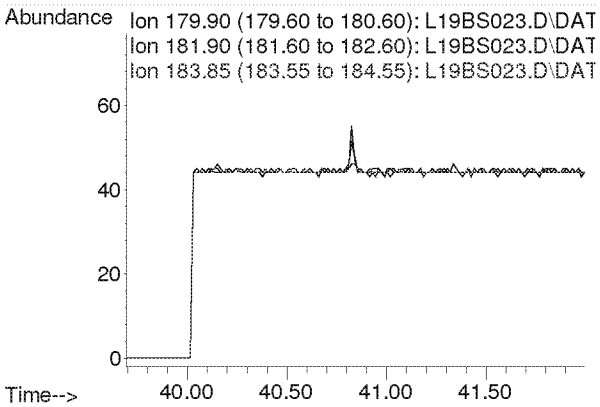


#61
1,2,4-Trichlorobenzene
Concen: N.D.
Expected RT: 40.84 min

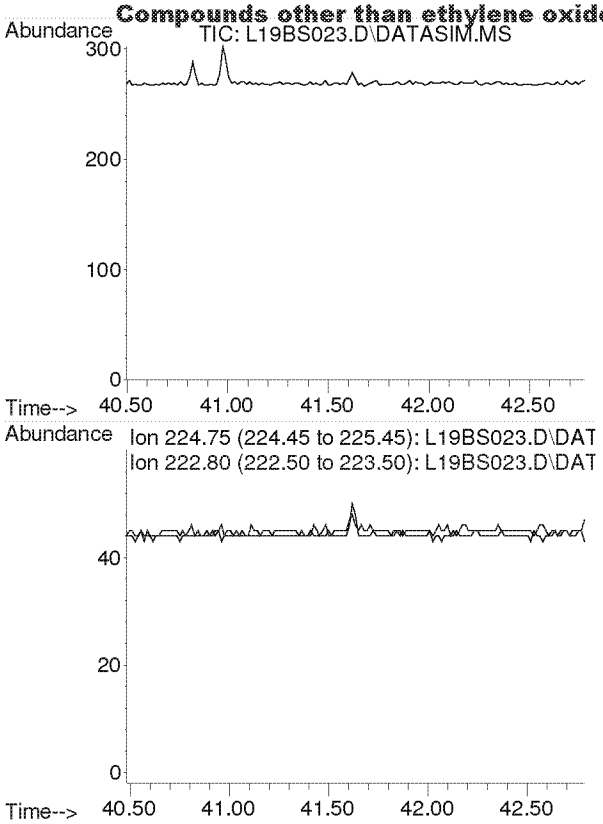
Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 180

Sig	Exp Ratio
180	100
182	94.6
184	30.2



Compounds other than ethylene oxide were not quantitated.



#62
Hexachloro-1,3-butadiene
Concen: N.D.
Expected RT: 41.63 min

Lab File: L19BS023.D
Acq: 20 Feb 2019 8:59 am

Tgt Ion: 225

Sig	Exp Ratio
225	100
223	62.4

Compounds other than ethylene oxide were not quantitated.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS024.D
Acq On : 20 Feb 2019 10:01 am (#1); 20-Feb-19, 09:56:26 (#2)
Operator : MAH
Sample : 9021401-09
Misc : EPA WB WAREHOUSE 2/12/19 (Sig #1); (Sig #2)
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 20 14:48:50 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

EPA only

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) IS-Hexane-d14	19.968	66	40994	4.7700 ppbv	-0.02
29) IS-1,4-Difluorobenzene	23.128	114	101669	4.9900 ppbv	-0.02
43) IS-Chlorobenzene-d5	30.095	117	73090	4.7400 ppbv	-0.02

System Monitoring Compounds

Target Compounds					Qvalue
2) Acetylene	0.000	26	0	N.D. d	
3) Propylene	0.000	41	0	N.D. d	
4) Dichlorodifluoromethane	0.000	85	0	N.D. d	
5) Chloromethane	0.000	50	0	N.D. d	
6) Dichlorotetrafluoroethane	0.000	85	0	N.D. d	
7) Vinyl Chloride	0.000	62	0	N.D.	
8) 1,3-Butadiene	0.000	54	0	N.D. d	
9) Ethylene oxide	0.000	29	0	N.D. d SV	
10) Bromomethane	0.000	94	0	N.D. d	
11) Chloroethane	0.000	64	0	N.D.	
12) Acetonitrile	0.000	41	0	N.D. d	
13) Acrolein	0.000	56	0	N.D. d	
14) Trichlorofluoromethane	0.000	101	0	N.D. d	
15) Acrylonitrile	0.000	53	0	N.D.	
16) 1,1-Dichloroethene	0.000	61	0	N.D.	
17) Methylene Chloride	0.000	49	0	N.D. d	
18) Carbon Disulfide	0.000	76	0	N.D. d	
19) Trichlorotrifluoroethane	0.000	101	0	N.D. d	
20) trans-1,2-Dichloroethy...	0.000	96	0	N.D.	
21) 1,1-Dichloroethane	0.000	63	0	N.D.	
22) Methyl tert-Butyl Ether	0.000	73	0	N.D. d	
23) Chloroprene	0.000	53	0	N.D.	
24) cis-1,2-Dichloroethylene	0.000	61	0	N.D.	
25) Bromochloromethane	0.000	128	0	N.D.	
26) Chloroform	0.000	83	0	N.D. d	
27) Ethyl tert-Butyl Ether	0.000	59	0	N.D.	
28) 1,2-Dichloroethane	0.000	62	0	N.D. d	
30) 1,1,1-Trichloroethane	0.000	97	0	N.D.	
31) Benzene	0.000	78	0	N.D. d	
32) Carbon Tetrachloride	0.000	117	0	N.D. d	
33) tert-Amyl Methyl Ether	0.000	73	0	N.D.	
34) 1,2-Dichloropropane	0.000	63	0	N.D.	
35) Ethyl Acrylate	0.000	55	0	N.D.	
36) Bromodichloromethane	0.000	83	0	N.D.	
37) Trichloroethylene	0.000	130	0	N.D.	
38) Methyl Methacrylate	0.000	41	0	N.D.	
39) cis-1,3-Dichloropropene	0.000	75	0	N.D.	
40) Methyl Isobutyl Ketone	0.000	43	0	N.D. d	
41) trans-1,3-Dichloropropene	0.000	75	0	N.D.	
42) 1,1,2-Trichloroethane	0.000	97	0	N.D.	
44) Toluene	0.000	91	0	N.D. d	
45) Dibromochloromethane	0.000	129	0	N.D.	
46) 1,2-Dibromoethane	0.000	107	0	N.D.	
47) n-Octane	0.000	43	0	N.D. d	
48) Tetrachloroethylene	0.000	166	0	N.D. d	
49) Chlorobenzene	0.000	112	0	N.D.	
50) Ethylbenzene	0.000	91	0	N.D. d	

Compounds other than ethylene oxide were not quantitated

Quantitation Report (not Reviewed)

Data Path : C:\msdchem\1\DATA\L19BS\
Data File : L19BS024.D
Acq On : 20 Feb 2019 10:01 am (#1); 20-Feb-19, 09:56:26 (#2)
Operator : MAH
Sample : 9021401-09
Misc : EPA WB WAREHOUSE 2/12/19 (Sig #1); (Sig #2)
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 20 14:48:50 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration

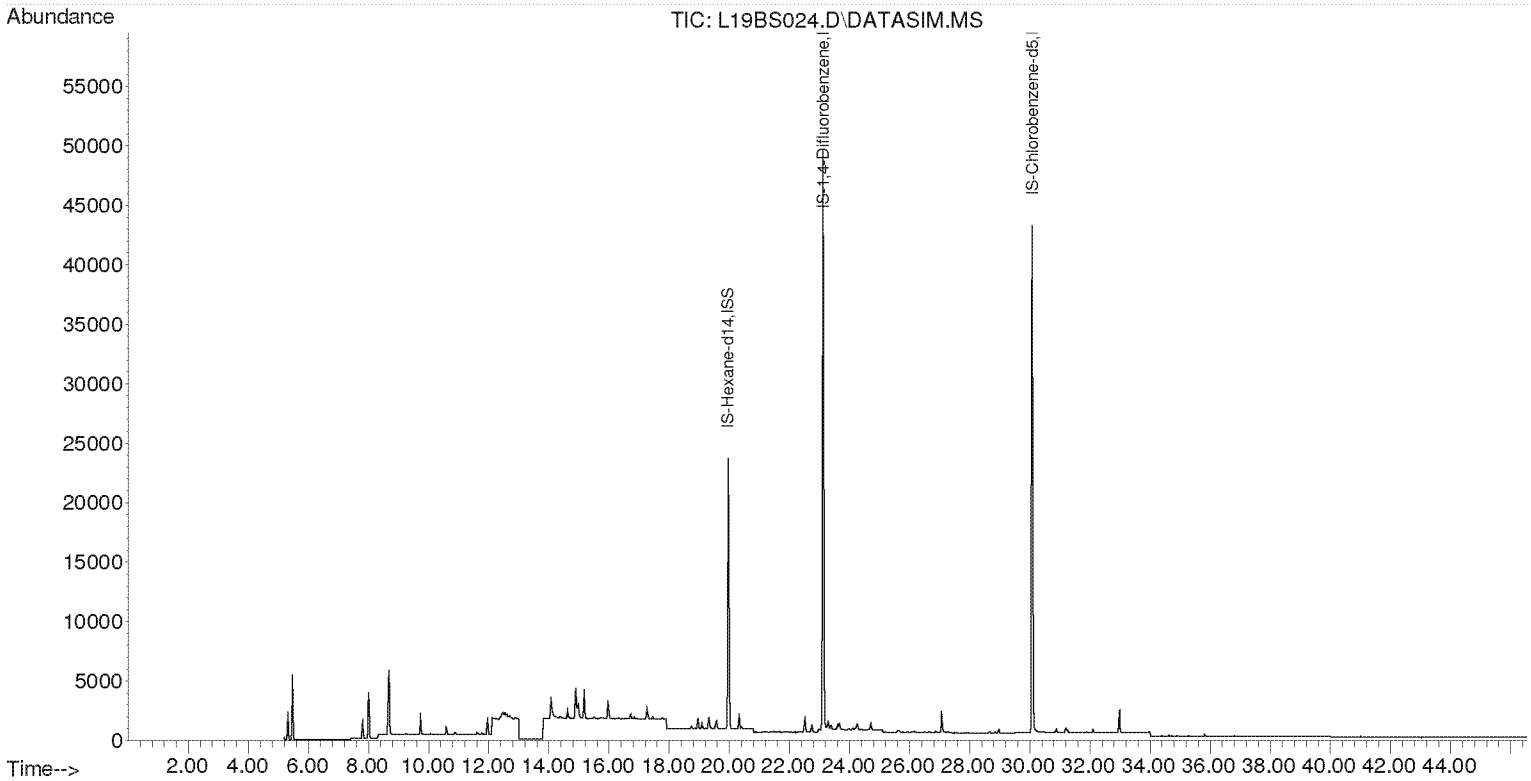
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
51) m,p-Xylene	0.000	91	0	N.D.	d
52) Bromoform	0.000	173	0	N.D.	
53) Styrene	0.000	104	0	N.D.	d
54) 1,1,2,2-Tetrachloroethane	0.000	83	0	N.D.	
55) o-Xylene	0.000	91	0	N.D.	d
56) 1,3,5-Trimethylbenzene	0.000	105	0	N.D.	d
57) 1,2,4-Trimethylbenzene	0.000	105	0	N.D.	d
58) m-Dichlorobenzene	0.000	146	0	N.D.	
59) p-Dichlorobenzene	0.000	146	0	N.D.	
60) o-Dichlorobenzene	0.000	146	0	N.D.	
61) 1,2,4-Trichlorobenzene	0.000	180	0	N.D.	
62) Hexachloro-1,3-butadiene	0.000	225	0	N.D.	

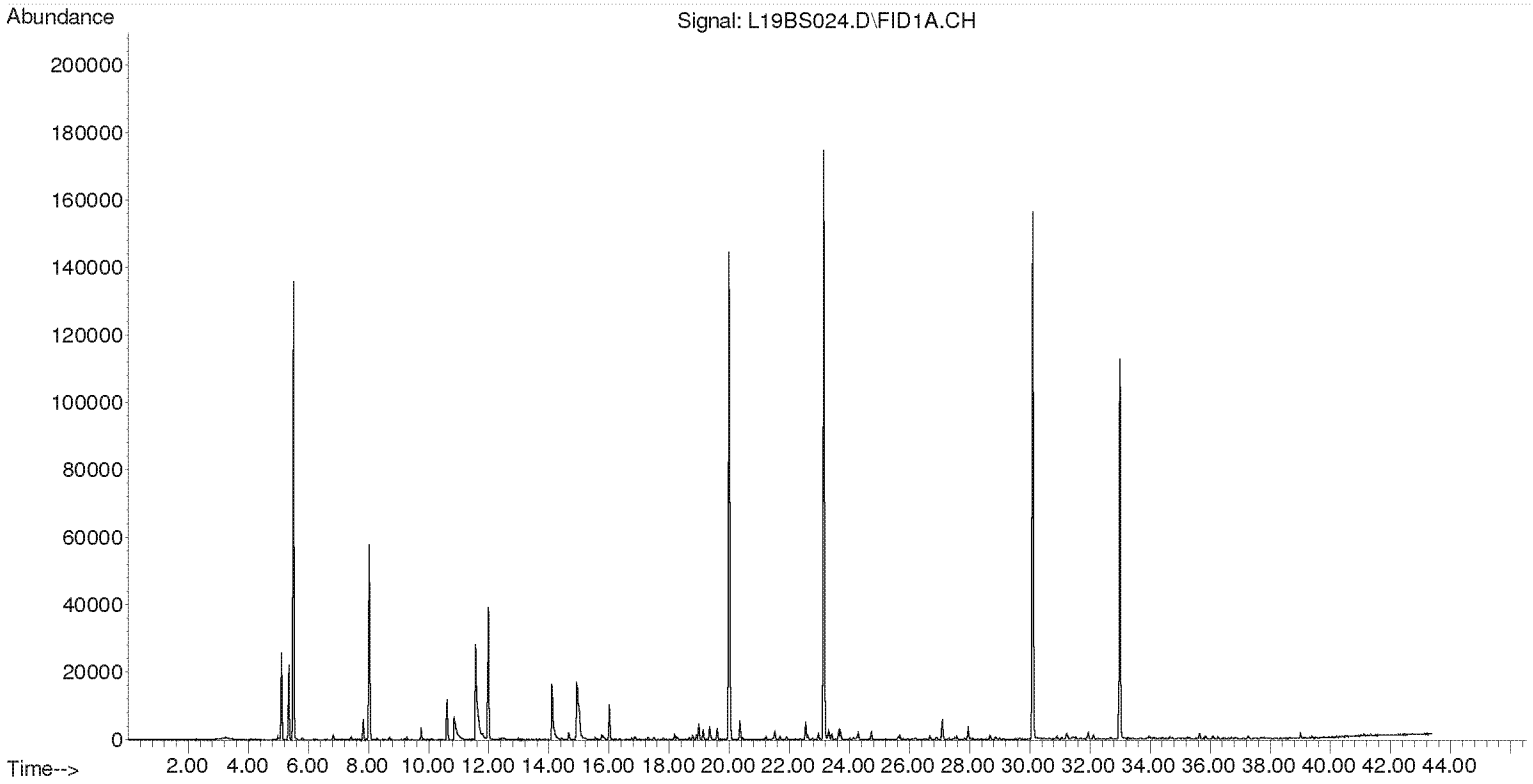
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Compounds other than ethylene oxide were not quantitated.

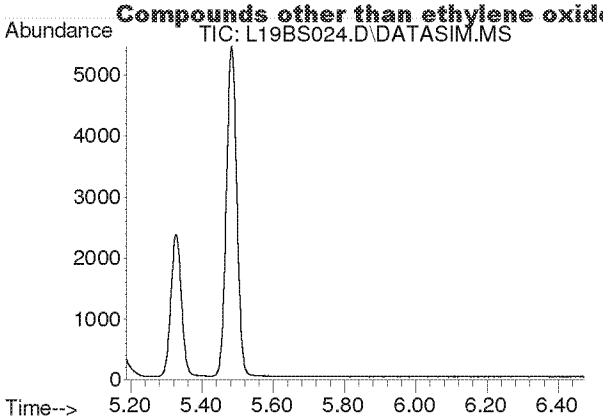
Data Path : Y:\MASS SPEC 1 DATA\L19BS\
Data File : L19BS024.D
Acq On : 20 Feb 2019 10:01 am (#1); 20 Feb 2019 9:56 am (#2)
Operator : MAH
Sample : 9021401-09
Misc : EPA WB WAREHOUSE 2/12/19 (Sig #1); (Sig #2)
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Feb 20 13:55:44 2019
Quant Method : C:\msdchem\1\METHODS\9020003.M
Quant Title : TO-15 by Selective Ion Analysis
QLast Update : Wed Feb 13 06:44:42 2019
Response via : Initial Calibration





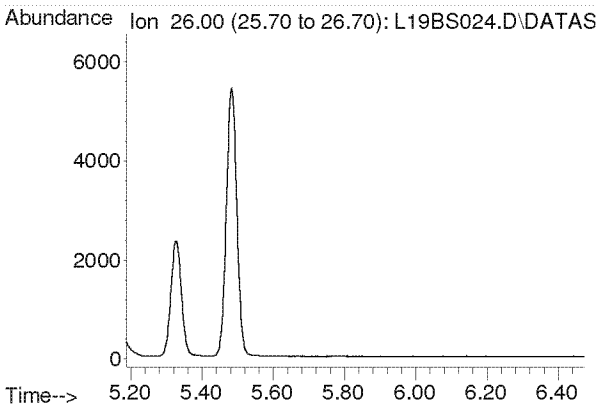
Compounds other than ethylene oxide were not quantitated.

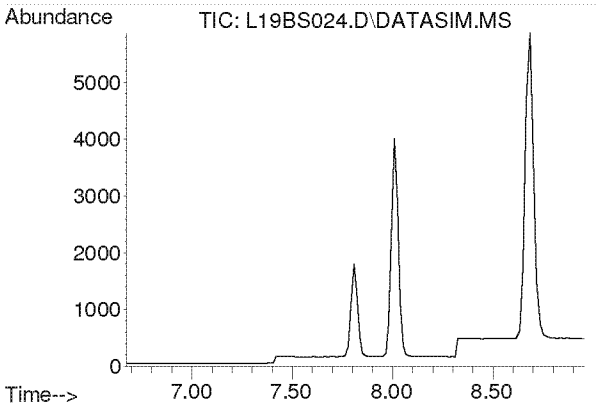


#2
Acetylene
Concen: N.D.
Expected RT: 5.40 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 26



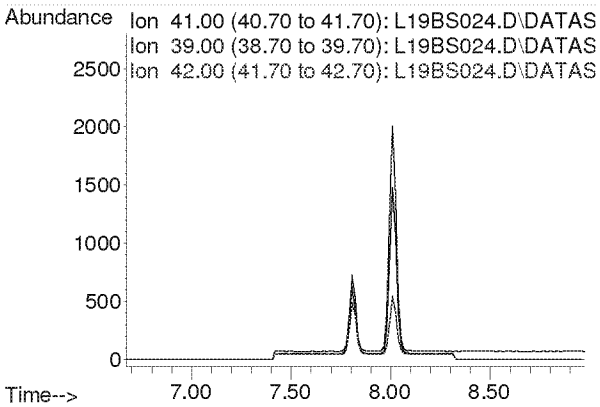


#3
Propylene
Concen: N.D.
Expected RT: 7.82 min

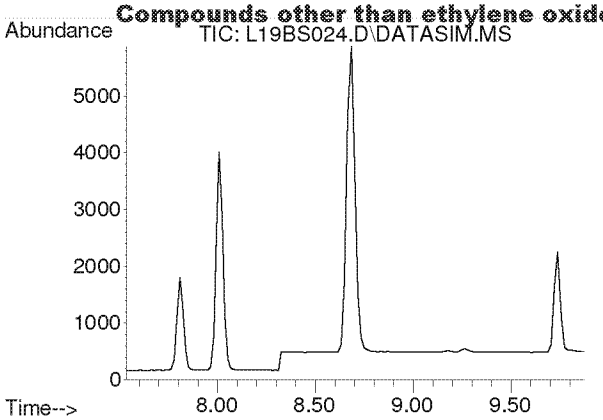
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
39	80.2
42	65.8



Compounds other than ethylene oxide were not quantitated.

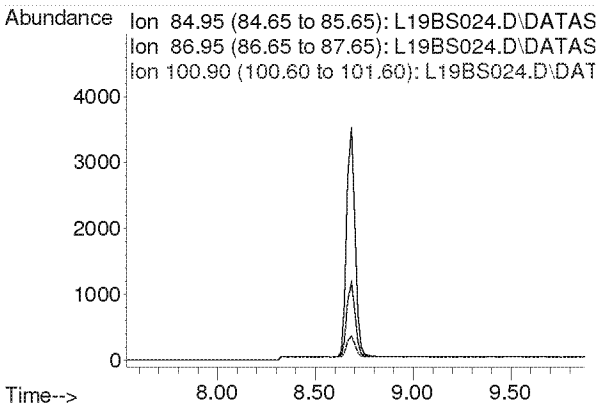


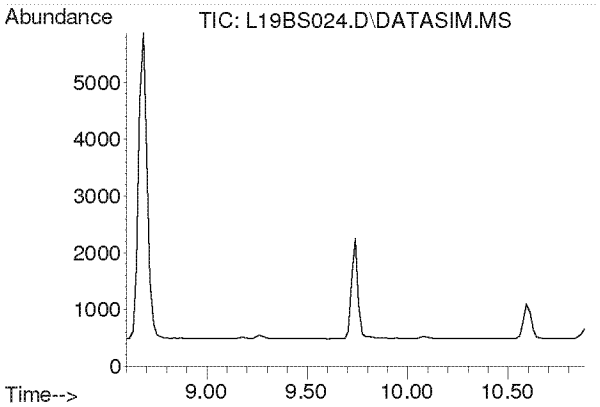
#4
Dichlorodifluoromethane
Concen: N.D.
Expected RT: 8.69 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
87	32.5
101	9.1



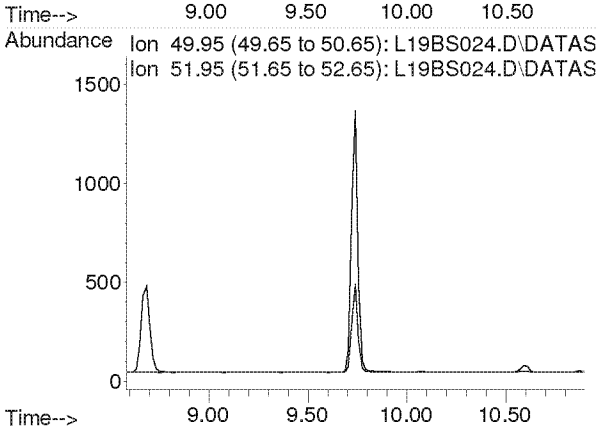


#5
Chloromethane
Concen: N.D.
Expected RT: 9.74 min

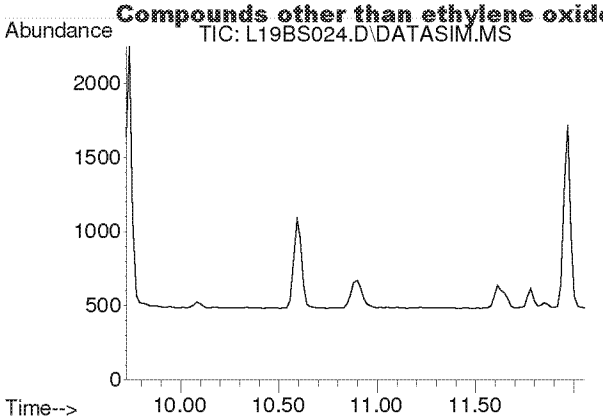
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 50

Sig	Exp Ratio
50	100
52	32.6



Compounds other than ethylene oxide were not quantitated.

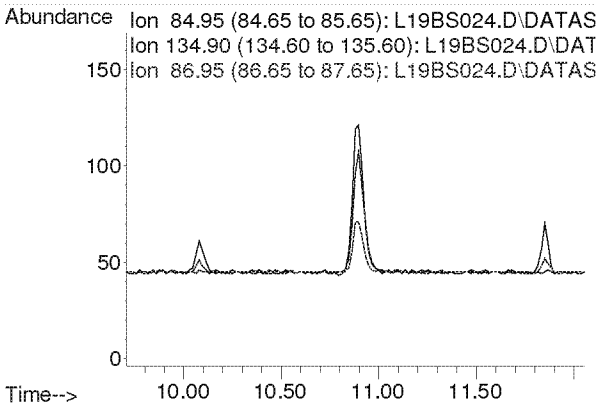


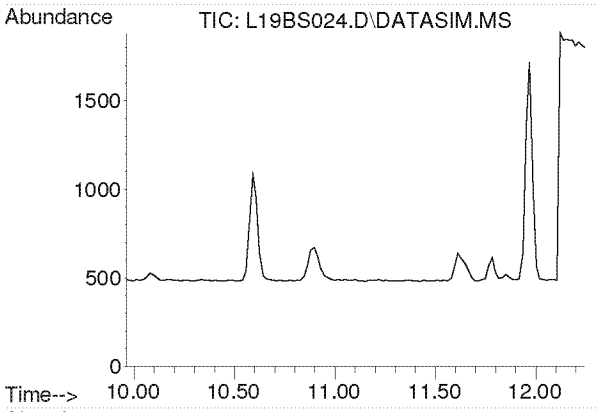
#6
Dichlorotetrafluoroethane
Concen: N.D.
Expected RT: 10.86 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 85

Sig	Exp Ratio
85	100
135	79.0
87	32.4



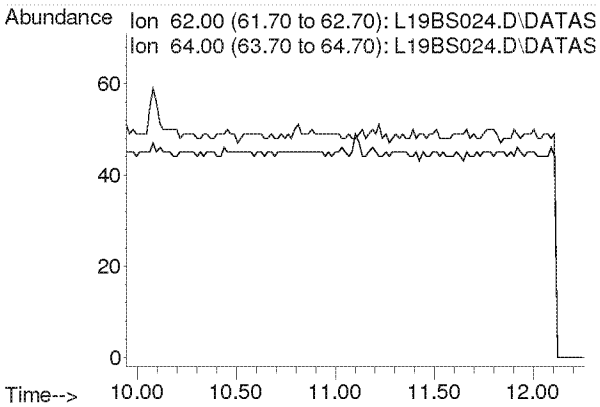


#7
Vinyl Chloride
Concen: N.D.
Expected RT: 11.10 min

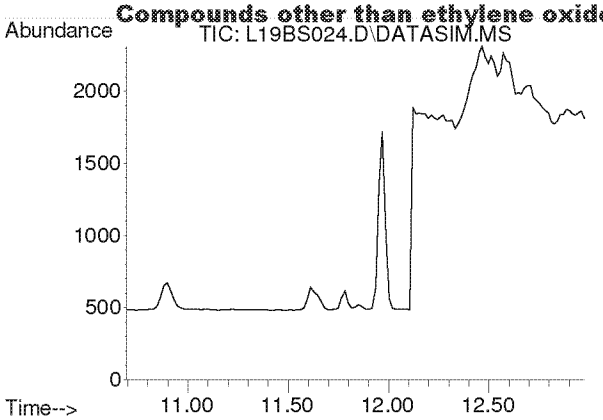
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	31.7



Compounds other than ethylene oxide were not quantitated.

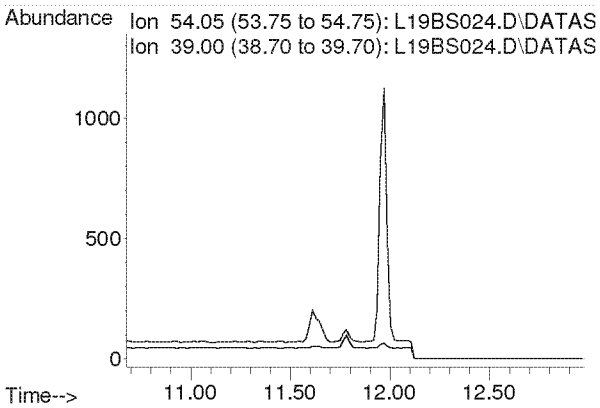


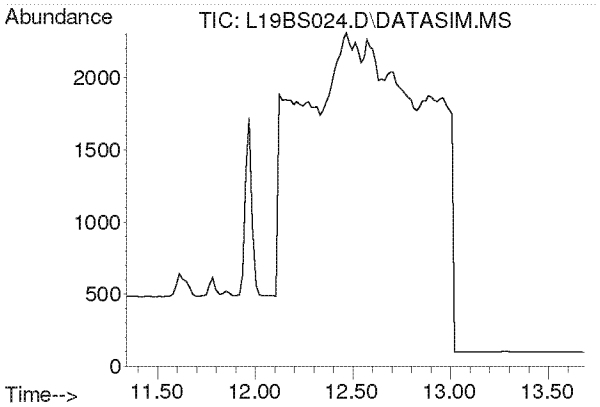
#8
1,3-Butadiene
Concen: N.D.
Expected RT: 11.78 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 54

Sig	Exp Ratio
54	100
39	102.0



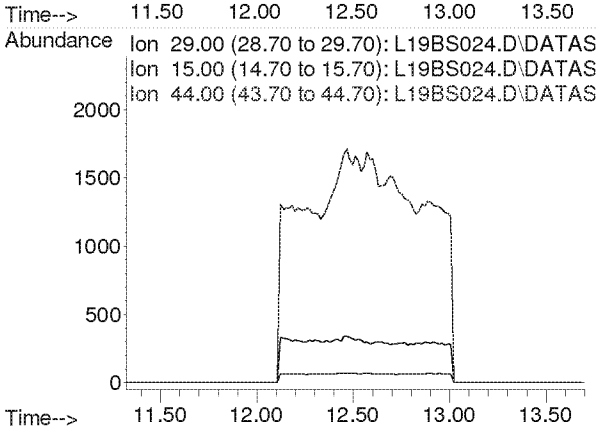


#9
Ethylene oxide
Concen: N.D.
Expected RT: 12.45 min

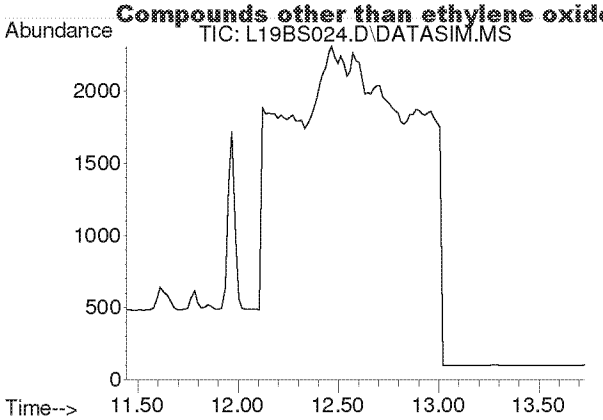
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 29

Sig	Exp Ratio
29	100
15	20.0
44	81.8



Compounds other than ethylene oxide were not quantitated.

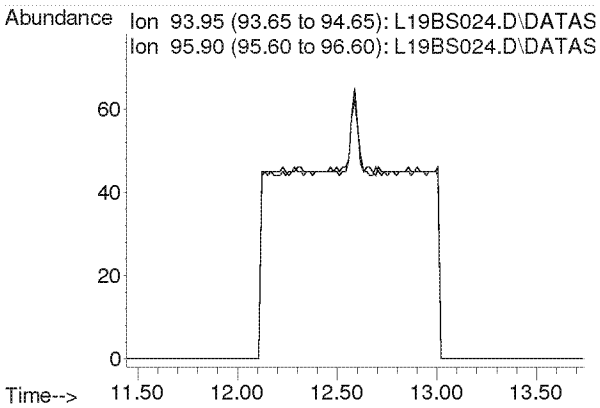


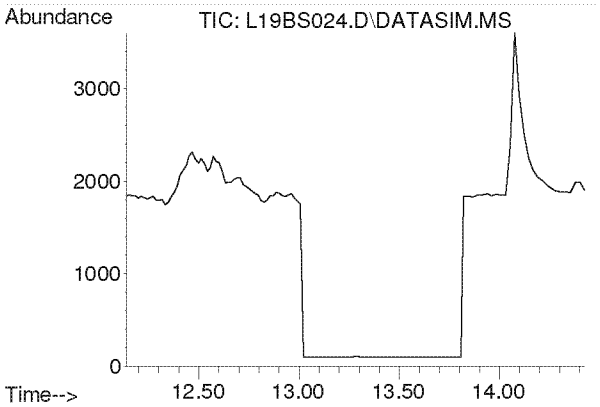
#10
Bromomethane
Concen: N.D.
Expected RT: 12.59 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 94

Sig	Exp Ratio
94	100
96	94.4



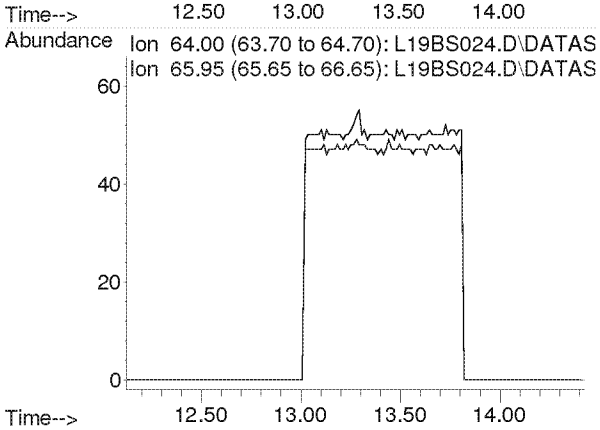


#11
Chloroethane
Concen: N.D.
Expected RT: 13.28 min

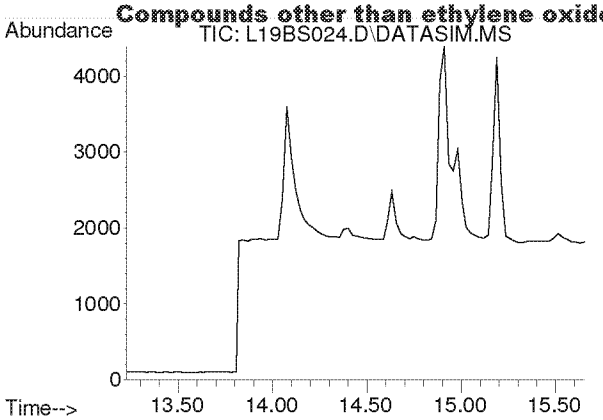
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2



Compounds other than ethylene oxide were not quantitated.

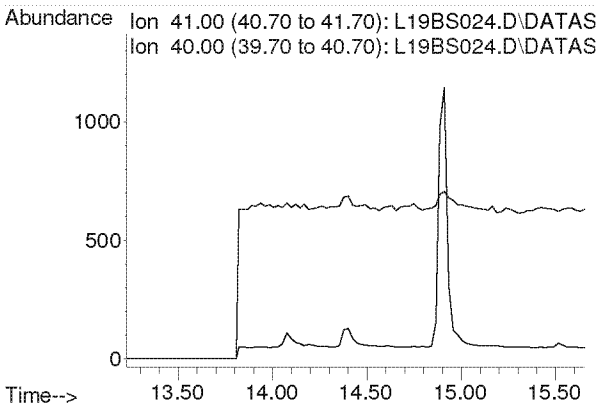


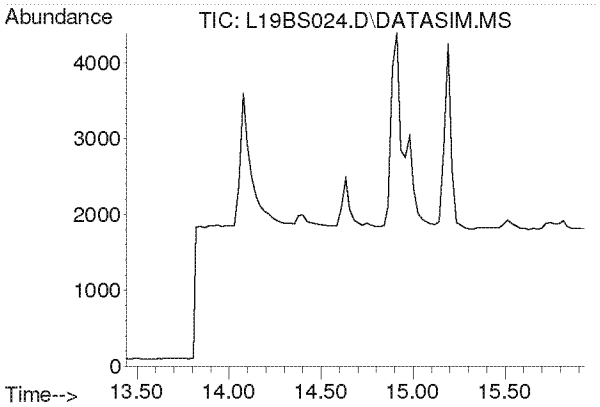
#12
Acetonitrile
Concen: N.D.
Expected RT: 14.36 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
40	52.8



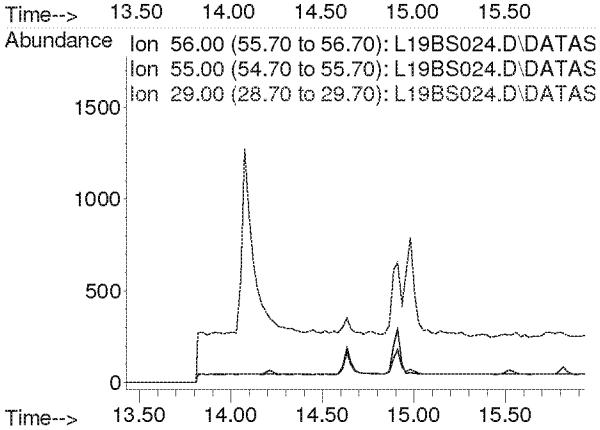


#13
Acrolein
Concen: N.D.
Expected RT: 14.63 min

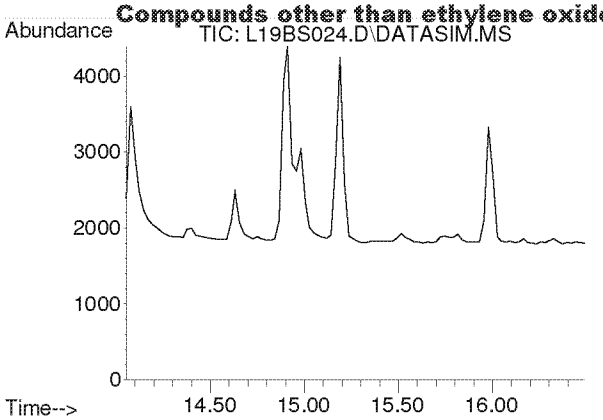
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 56

Sig	Exp Ratio
56	100
55	76.0
29	54.7



Compounds other than ethylene oxide were not quantitated.

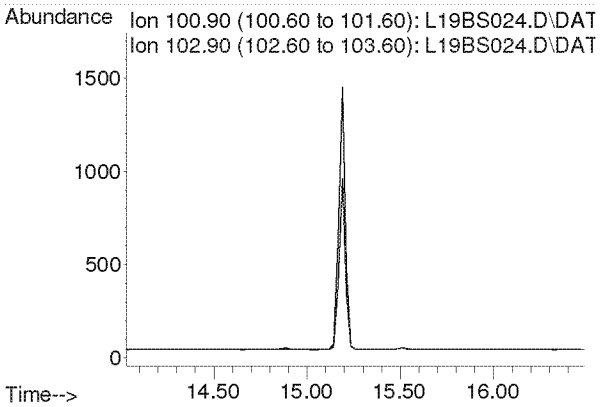


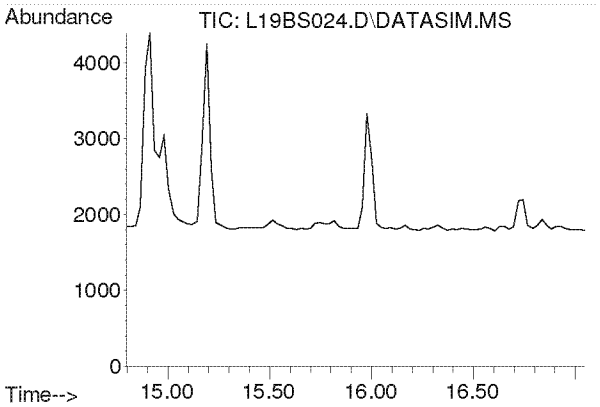
#14
Trichlorofluoromethane
Concen: N.D.
Expected RT: 15.19 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
103	64.6



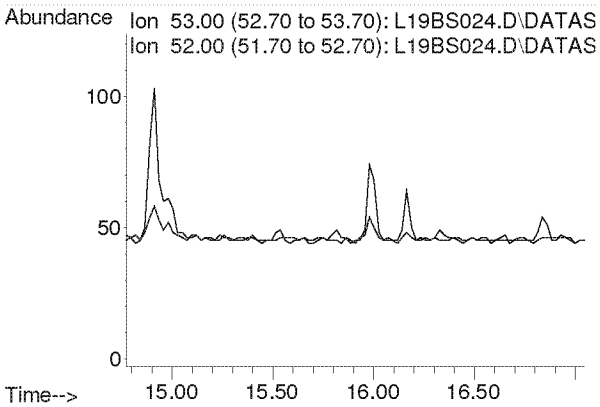


#15
Acrylonitrile
Concen: N.D.
Expected RT: 15.93 min

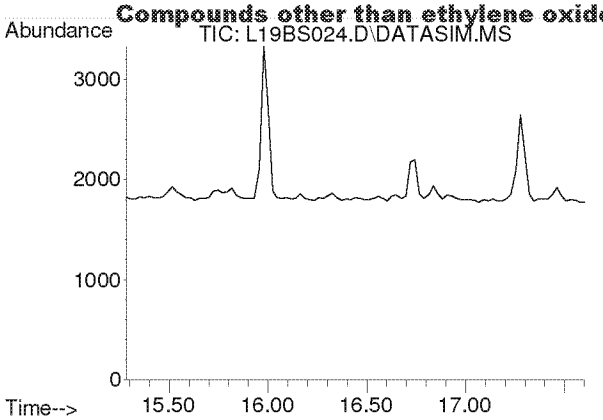
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
52	86.9



Compounds other than ethylene oxide were not quantitated.

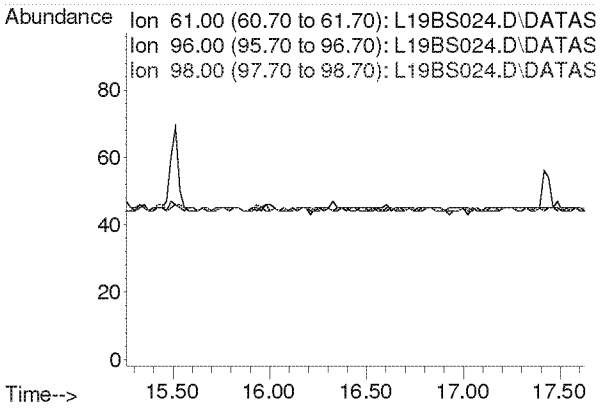


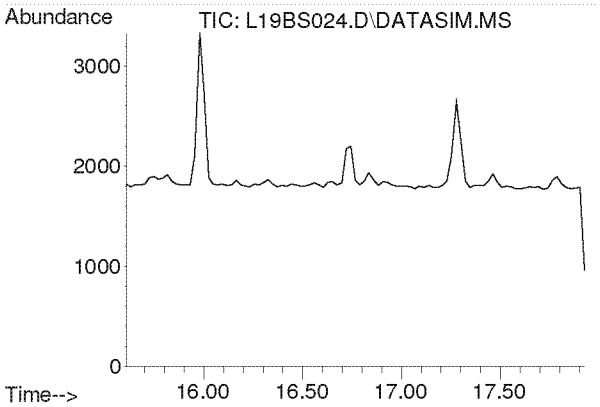
#16
1,1-Dichloroethene
Concen: N.D.
Expected RT: 16.42 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	59.1
98	38.2



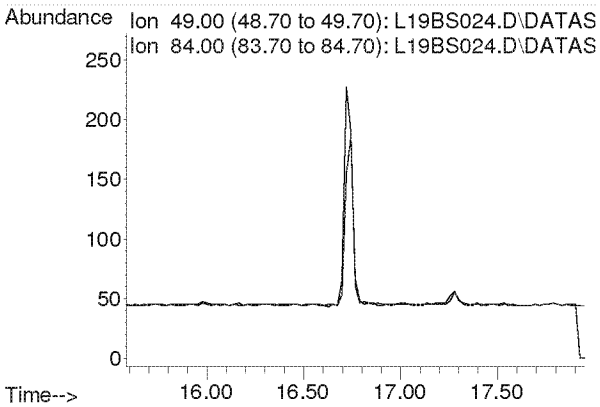


#17
Methylene Chloride
Concen: N.D.
Expected RT: 16.74 min

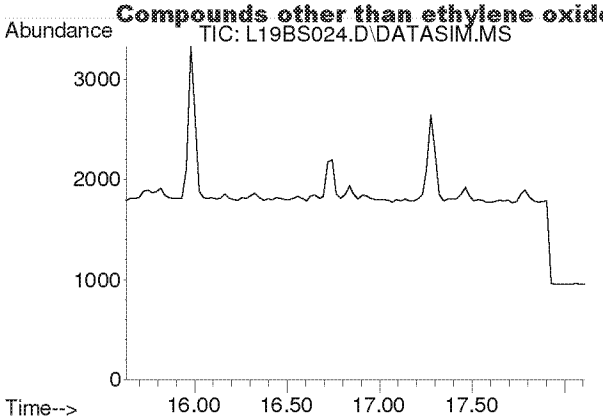
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 49

Sig	Exp Ratio
49	100
84	77.2



Compounds other than ethylene oxide were not quantitated.

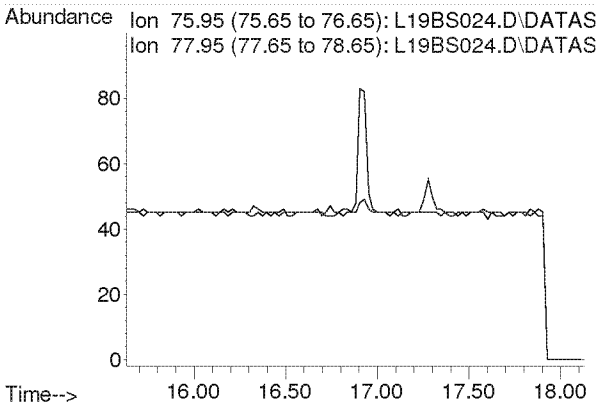


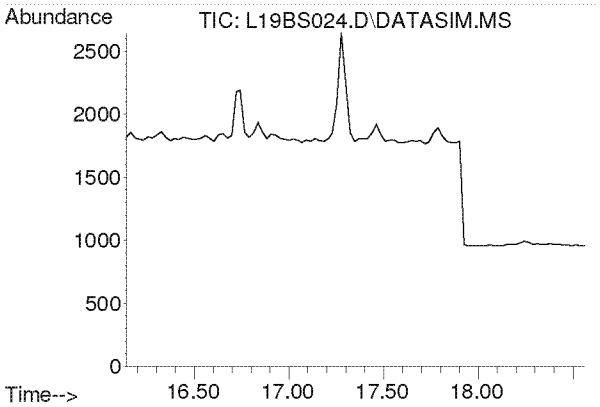
#18
Carbon Disulfide
Concen: N.D.
Expected RT: 16.93 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 76

Sig	Exp Ratio
76	100
78	9.2



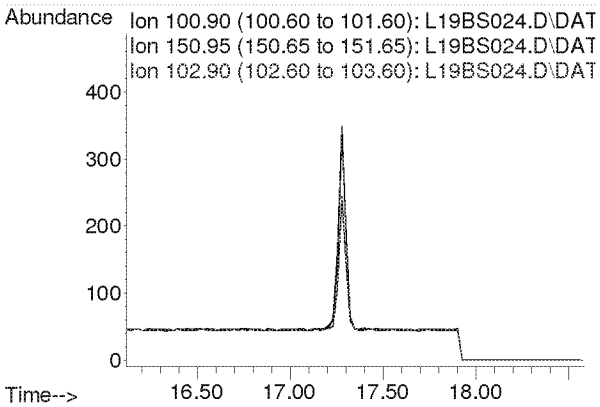


#19
Trichlorotrifluoroethane
Concen: N.D.
Expected RT: 17.28 min

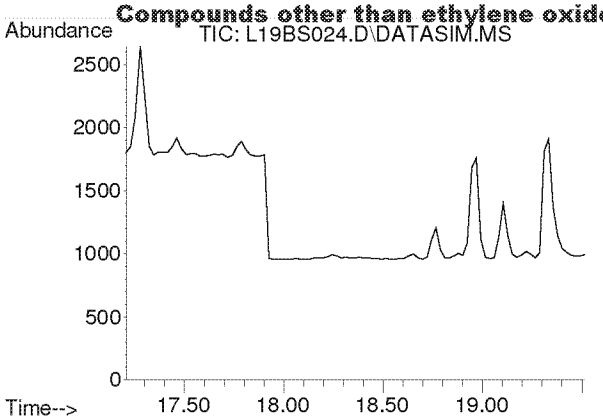
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 101

Sig	Exp Ratio
101	100
151	94.8
103	63.9



Compounds other than ethylene oxide were not quantitated.

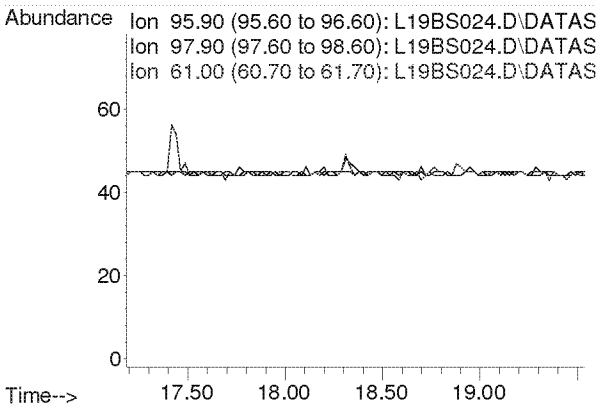


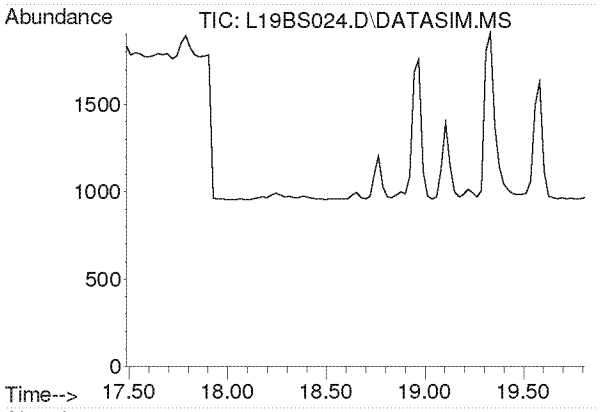
#20
trans-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 18.34 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 96

Sig	Exp Ratio
96	100
98	64.4
61	153.6



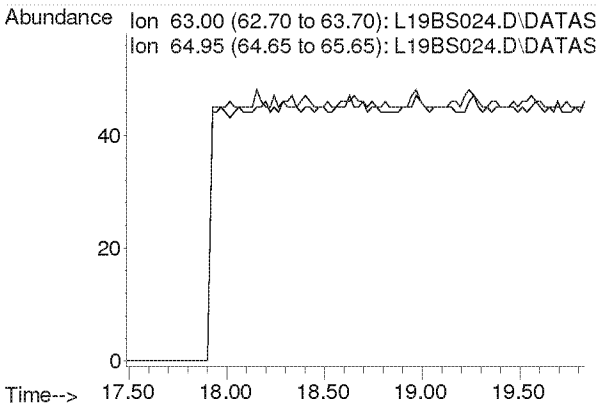


#21
1,1-Dichloroethane
Concen: N.D.
Expected RT: 18.63 min

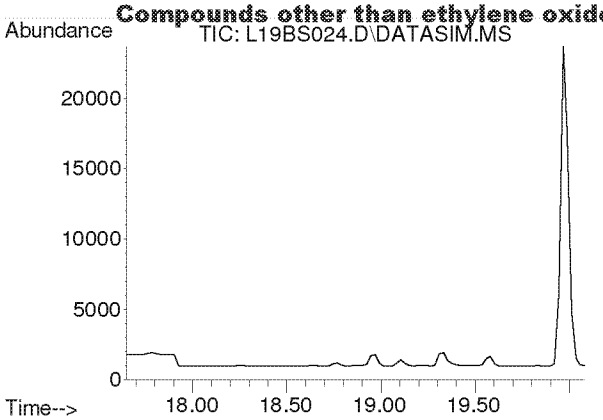
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
65	31.7



Compounds other than ethylene oxide were not quantitated.

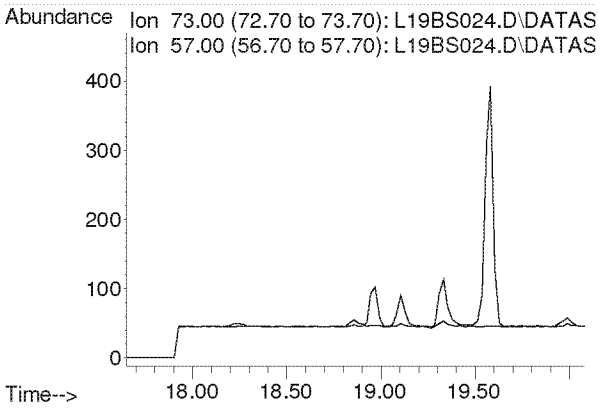


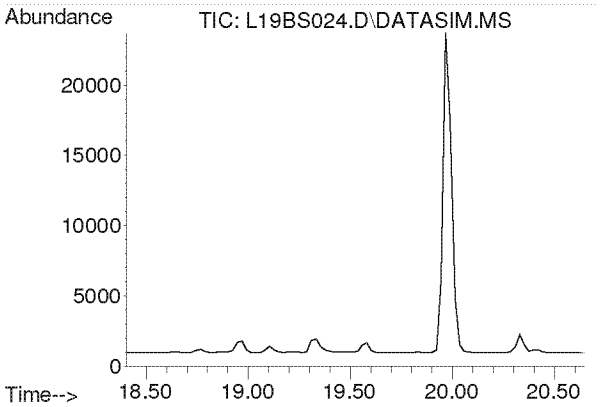
#22
Methyl tert-Butyl Ether
Concen: N.D.
Expected RT: 18.79 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
57	22.5



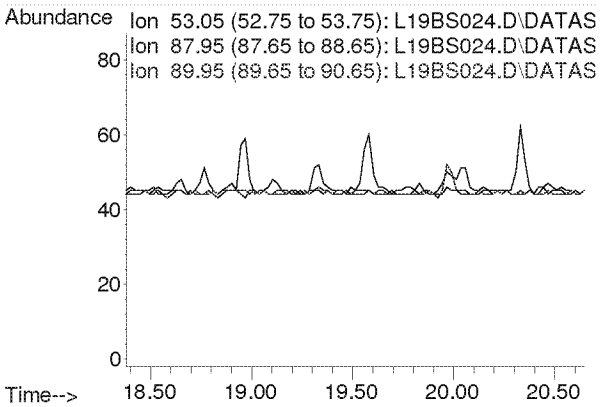


#23
Chloroprene
Concen: N.D.
Expected RT: 19.54 min

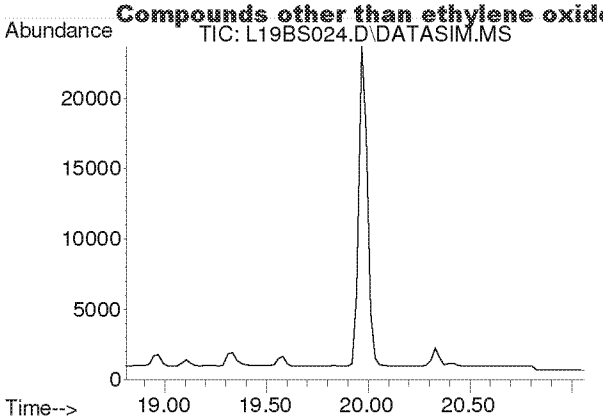
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 53

Sig	Exp Ratio
53	100
88	53.3
90	17.4



Compounds other than ethylene oxide were not quantitated.

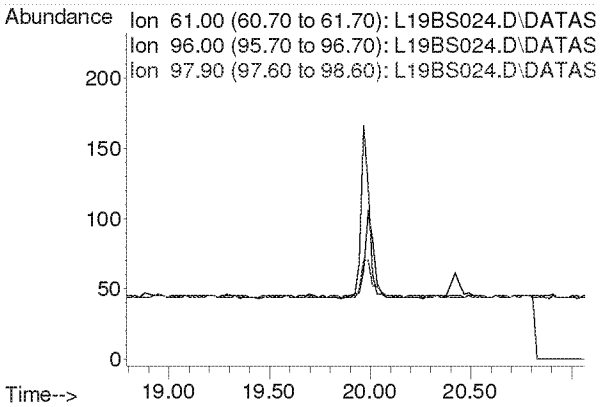


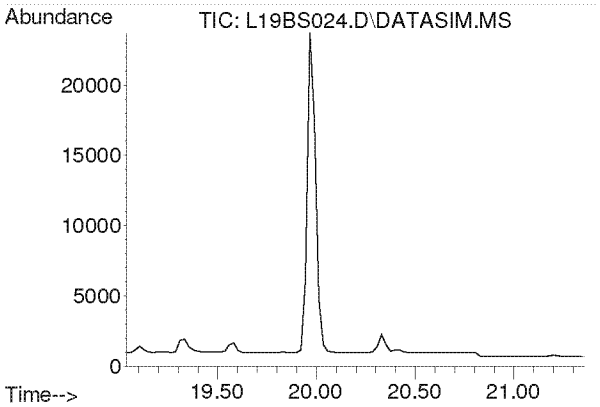
#24
cis-1,2-Dichloroethylene
Concen: N.D.
Expected RT: 19.95 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	73.8
98	47.0



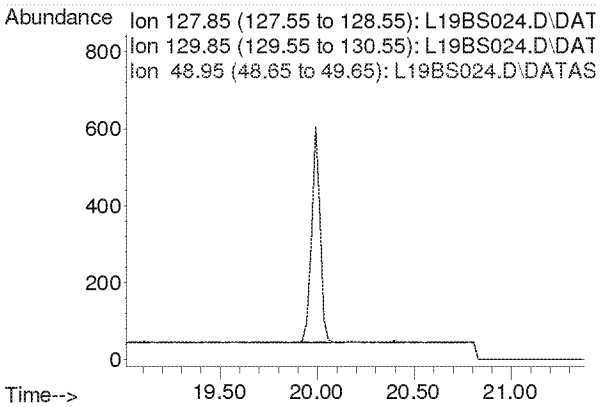


#25
Bromochloromethane
Concen: N.D.
Expected RT: 20.17 min

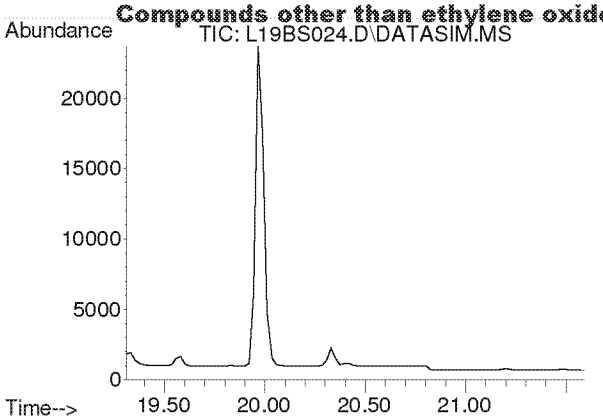
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 128

Sig	Exp Ratio
128	100
130	129.1
49	160.4



Compounds other than ethylene oxide were not quantitated.

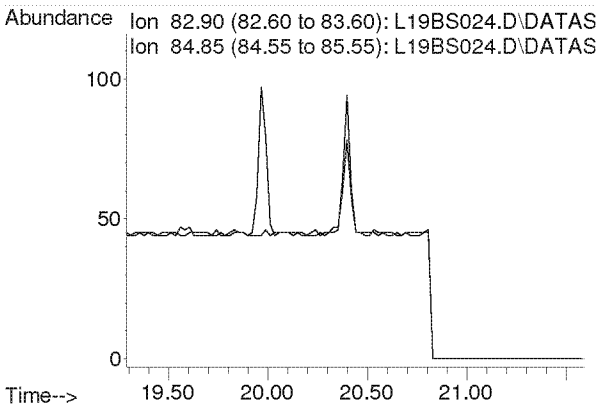


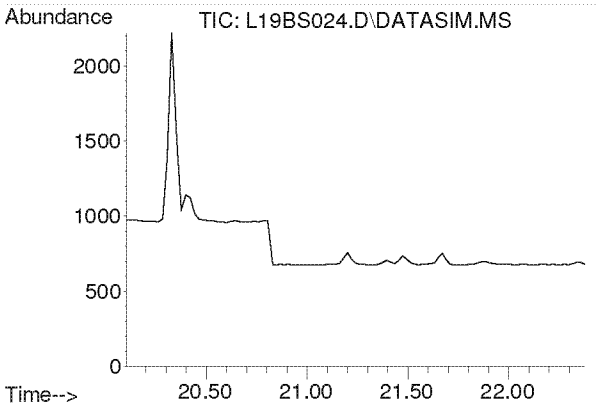
#26
Chloroform
Concen: N.D.
Expected RT: 20.40 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.4



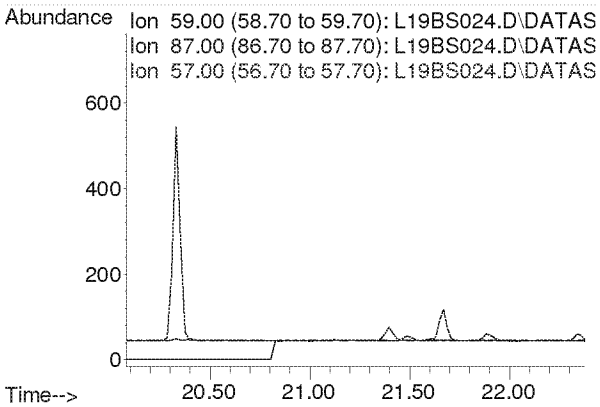


#27
Ethyl tert-Butyl Ether
Concen: N.D.
Expected RT: 21.18 min

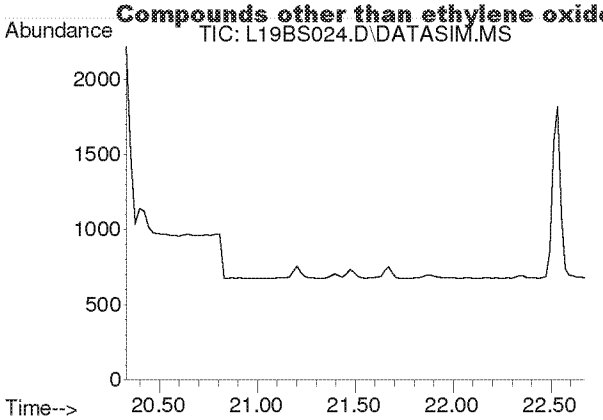
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 59

Sig	Exp Ratio
59	100
87	39.4
57	33.2



Compounds other than ethylene oxide were not quantitated.

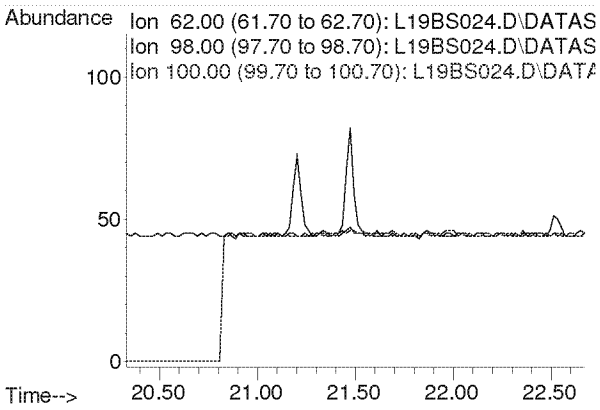


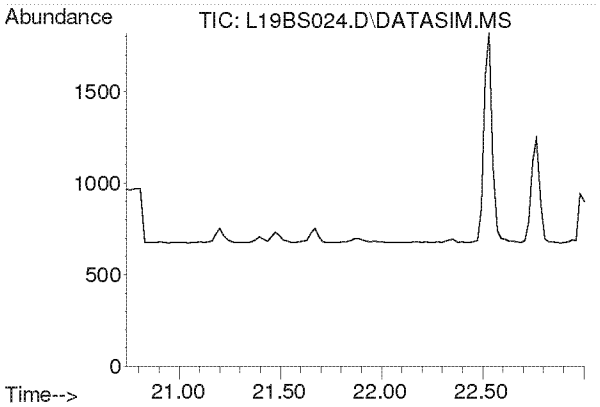
#28
1,2-Dichloroethane
Concen: N.D.
Expected RT: 21.48 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
98	6.3
100	4.0



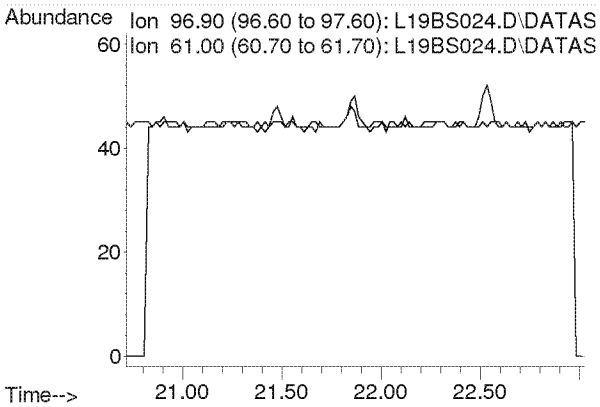


#30
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 21.87 min

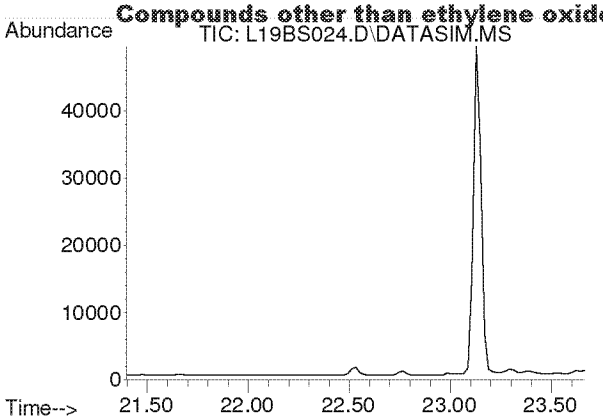
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
61	62.1



Compounds other than ethylene oxide were not quantitated.

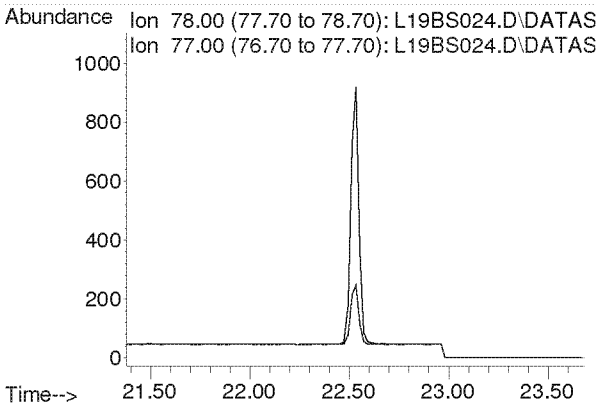


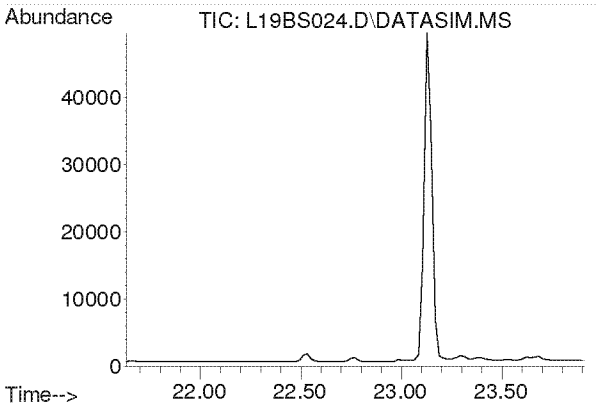
#31
Benzene
Concen: N.D.
Expected RT: 22.53 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 78

Sig	Exp Ratio
78	100
77	22.8



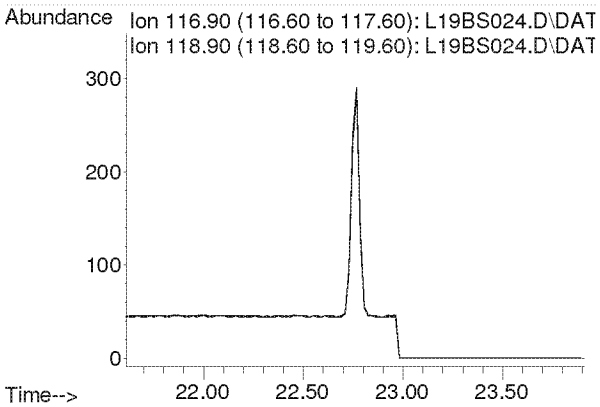


#32
Carbon Tetrachloride
Concen: N.D.
Expected RT: 22.77 min

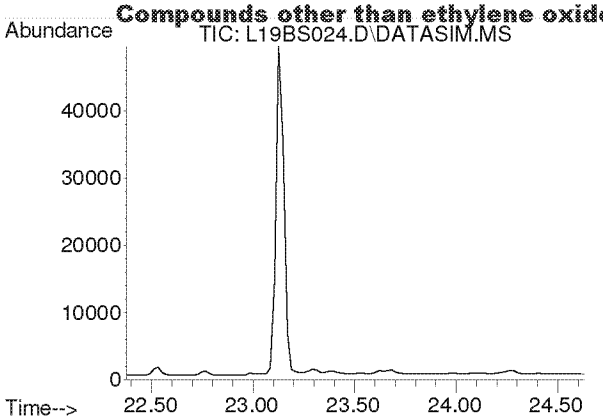
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 117

Sig	Exp Ratio
117	100
119	96.3



Compounds other than ethylene oxide were not quantitated.

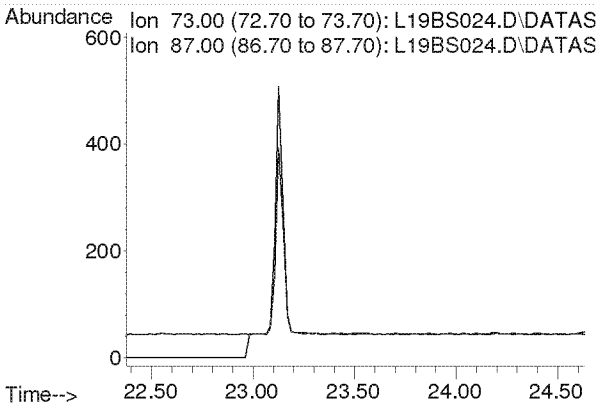


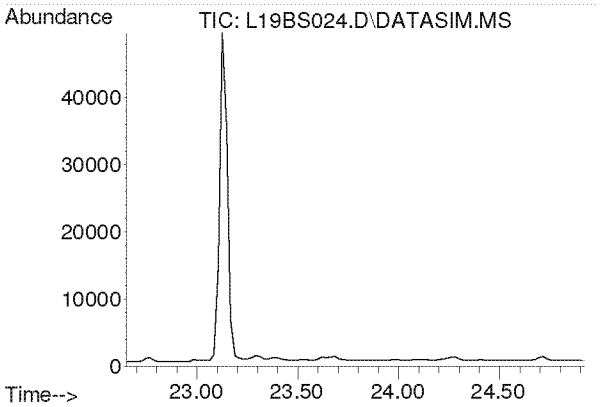
#33
tert-Amyl Methyl Ether
Concen: N.D.
Expected RT: 23.52 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 73

Sig	Exp Ratio
73	100
87	25.1



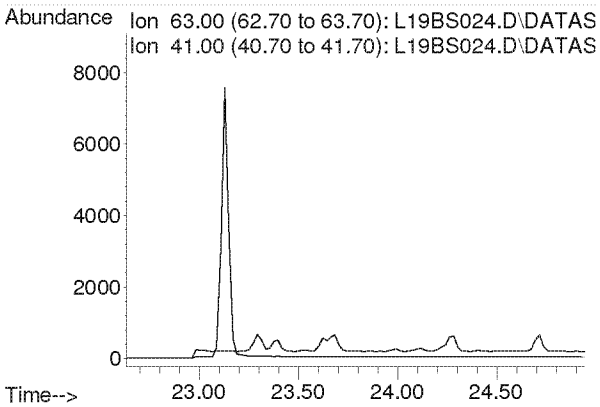


#34
1,2-Dichloropropane
Concen: N.D.
Expected RT: 23.79 min

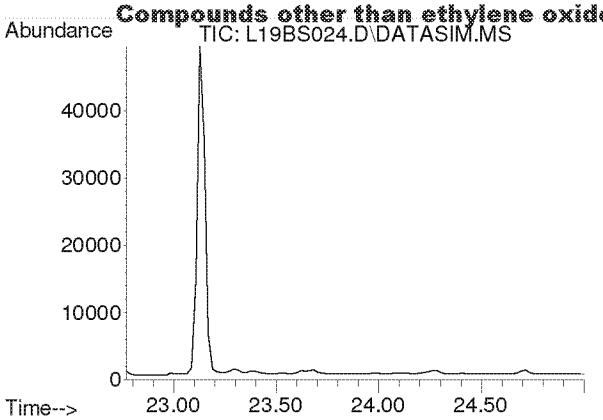
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	219.9



Compounds other than ethylene oxide were not quantitated.

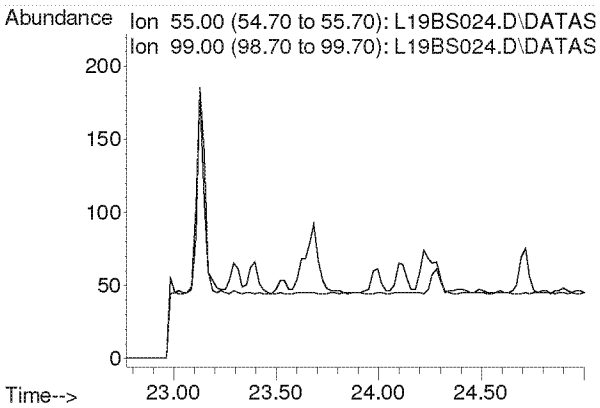


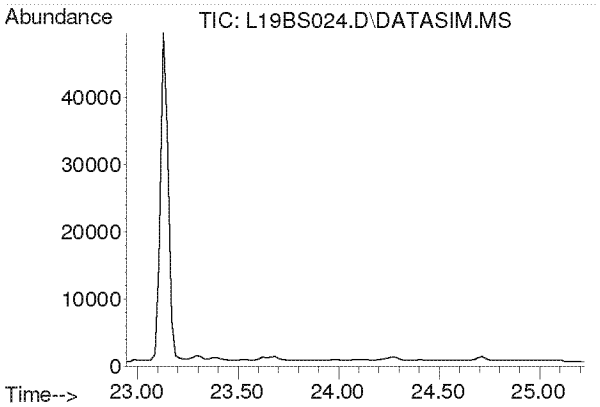
#35
Ethyl Acrylate
Concen: N.D.
Expected RT: 23.89 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 55

Sig	Exp Ratio
55	100
99	6.3



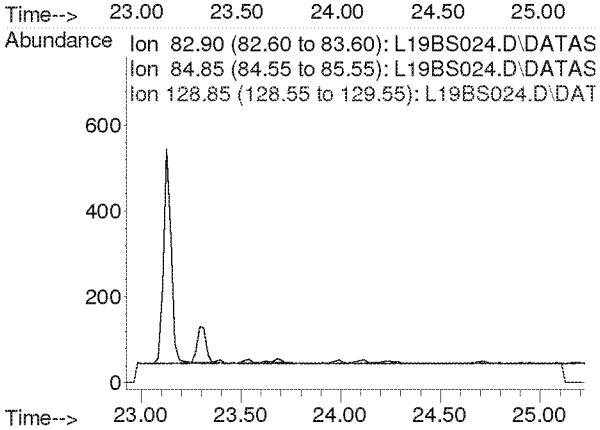


#36
Bromodichloromethane
Concen: N.D.
Expected RT: 24.08 min

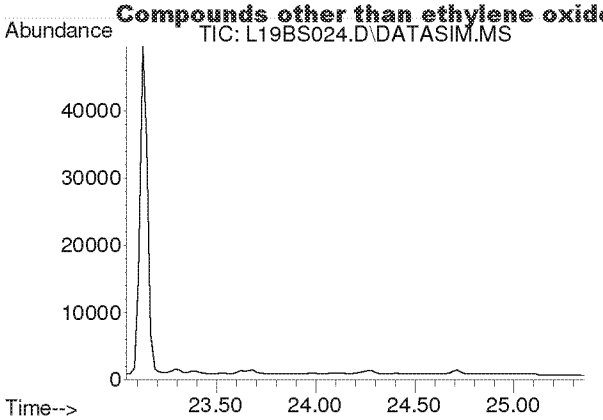
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	63.7
129	12.4



Compounds other than ethylene oxide were not quantitated.

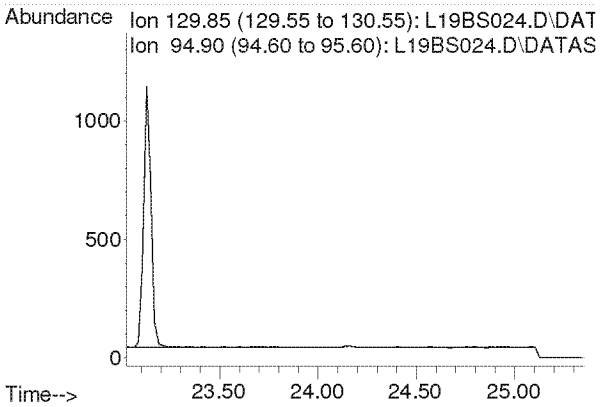


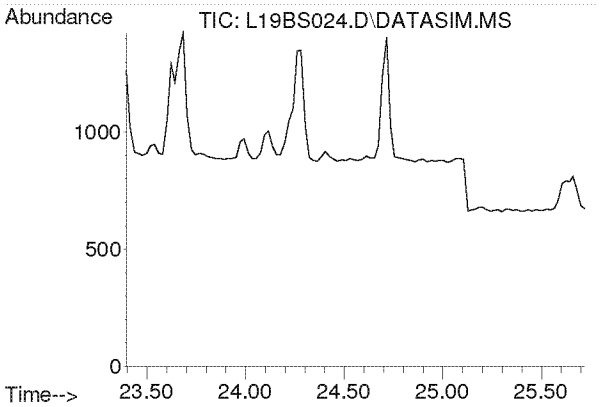
#37
Trichloroethylene
Concen: N.D.
Expected RT: 24.18 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 130

Sig	Exp Ratio
130	100
95	106.1



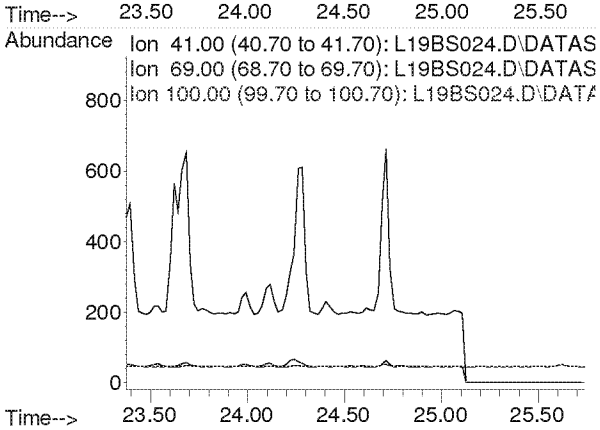


#38
Methyl Methacrylate
Concen: N.D.
Expected RT: 24.53 min

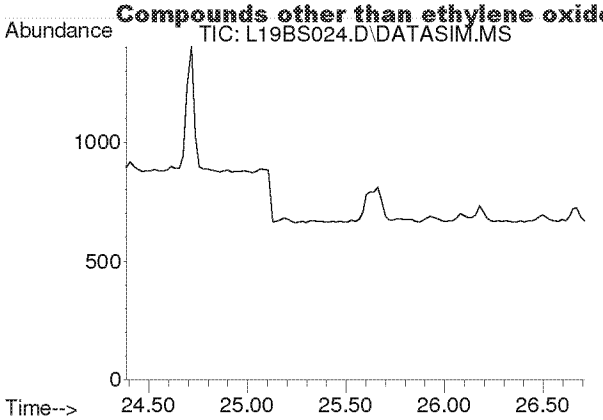
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 41

Sig	Exp Ratio
41	100
69	21.0
100	5.6



Compounds other than ethylene oxide were not quantitated.

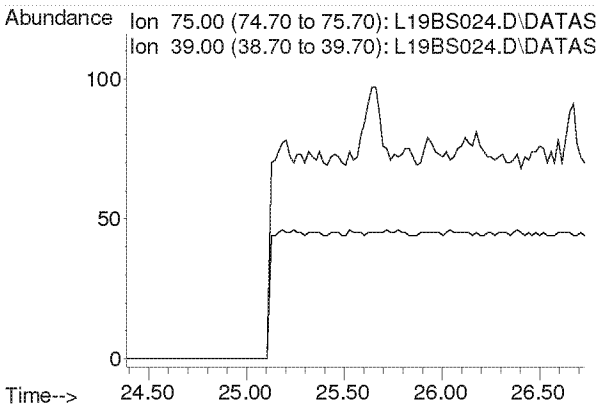


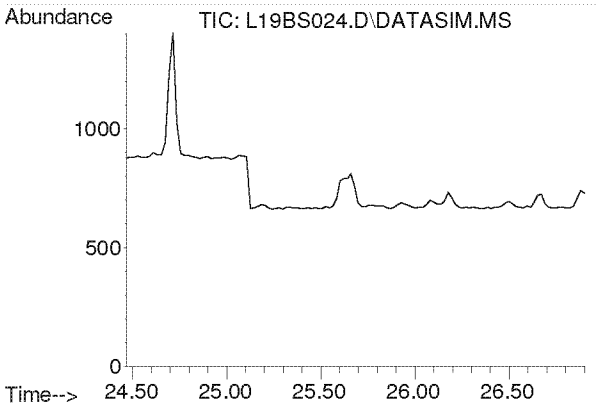
#39
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 25.53 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	54.2



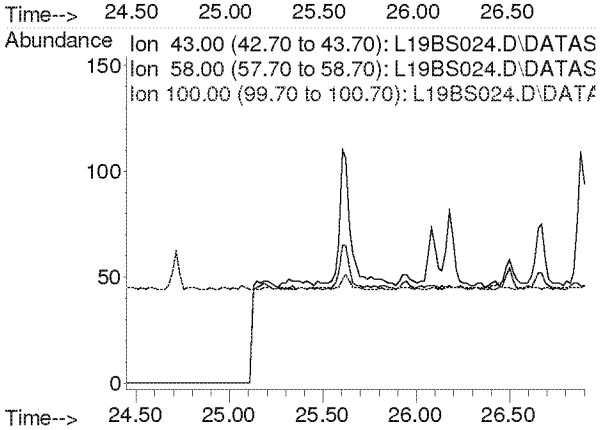


#40
Methyl Isobutyl Ketone
Concen: N.D.
Expected RT: 25.60 min

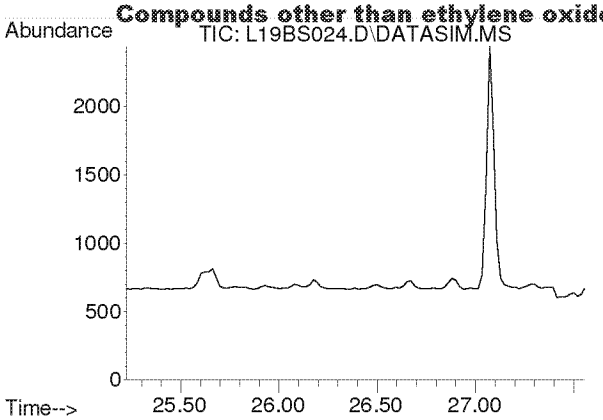
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
58	35.0
100	8.7



Compounds other than ethylene oxide were not quantitated.

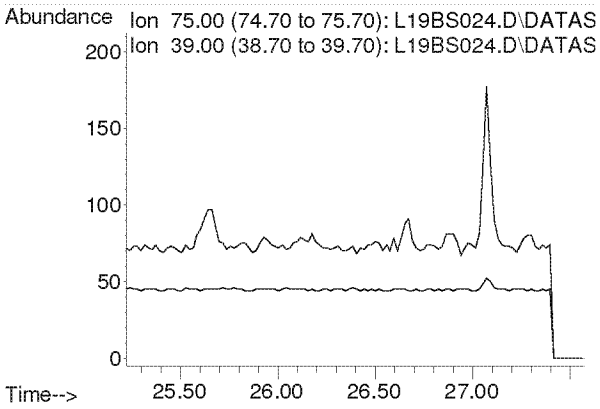


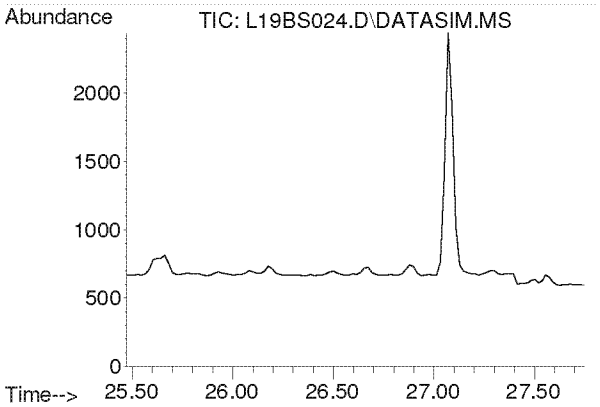
#41
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 26.37 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	53.6



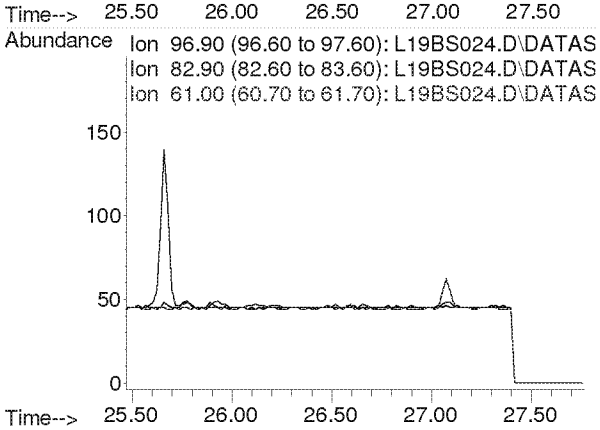


#42
1,1,2-Trichloroethane
Concen: N.D.
Expected RT: 26.62 min

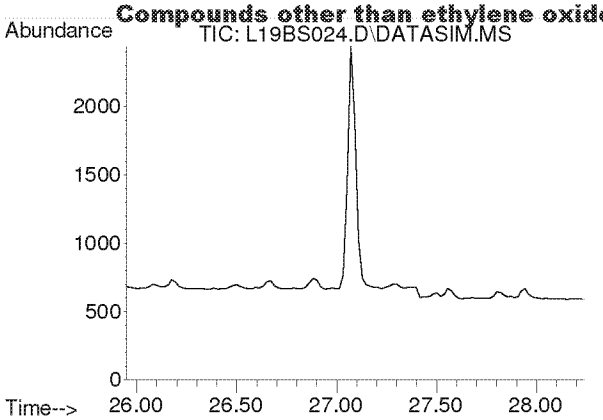
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 97

Sig	Exp Ratio
97	100
83	94.2
61	62.2



Compounds other than ethylene oxide were not quantitated.

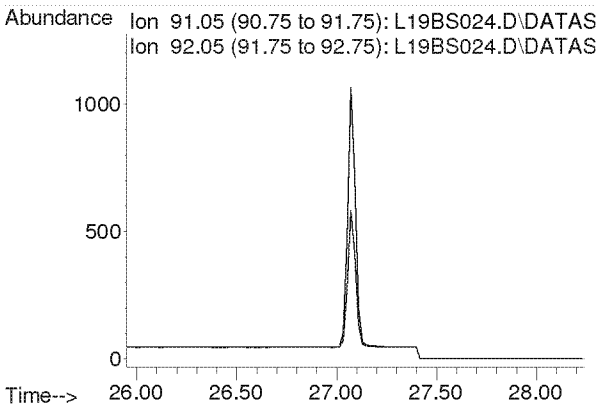


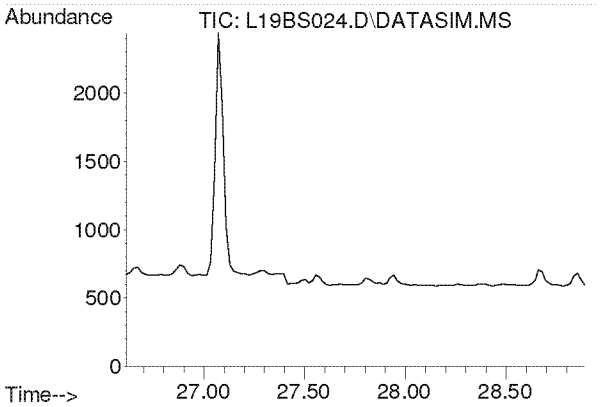
#44
Toluene
Concen: N.D.
Expected RT: 27.09 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
92	52.5



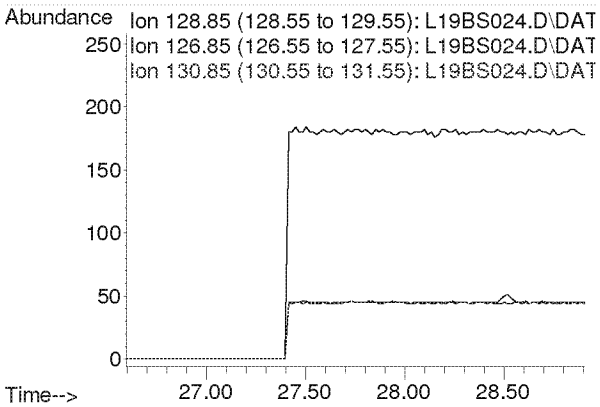


#45
Dibromochloromethane
Concen: N.D.
Expected RT: 27.75 min

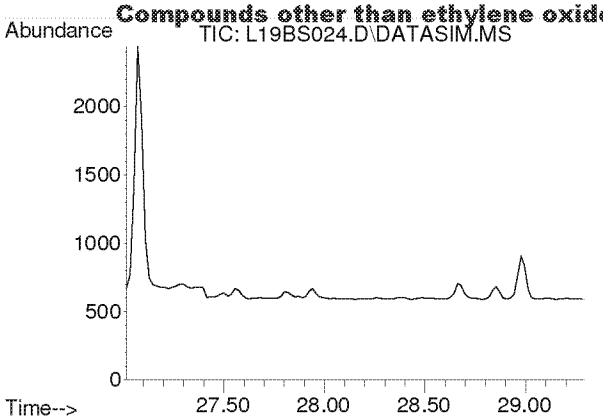
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 129

Sig	Exp Ratio
129	100
127	19.3
131	6.0



Compounds other than ethylene oxide were not quantitated.

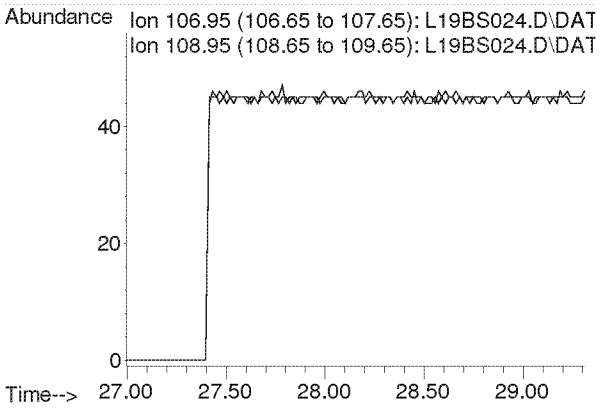


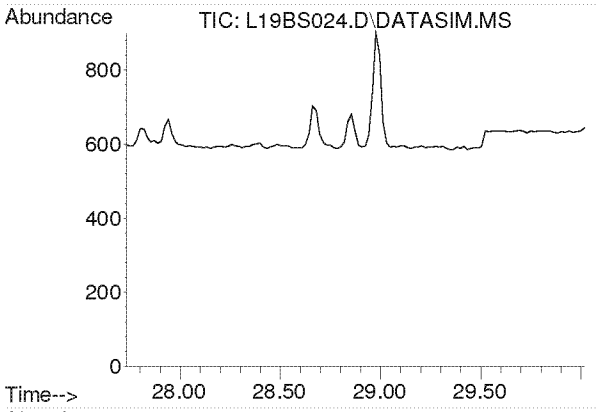
#46
1,2-Dibromoethane
Concen: N.D.
Expected RT: 28.15 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 107

Sig	Exp Ratio
107	100
109	94.2



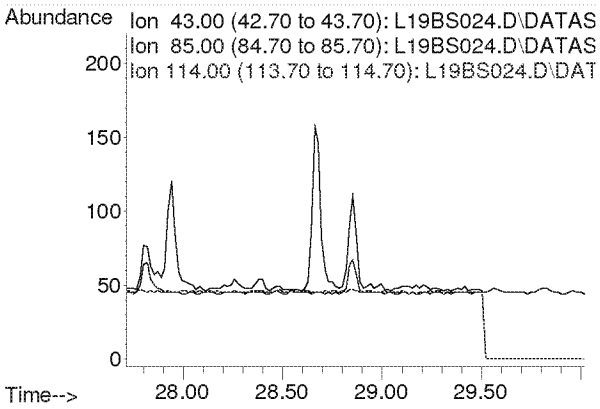


#47
n-Octane
Concen: N.D.
Expected RT: 28.87 min

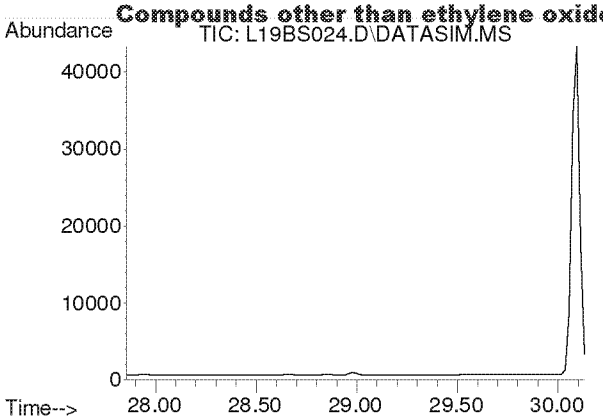
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 43

Sig	Exp Ratio
43	100
85	41.3
114	2.8



Compounds other than ethylene oxide were not quantitated.

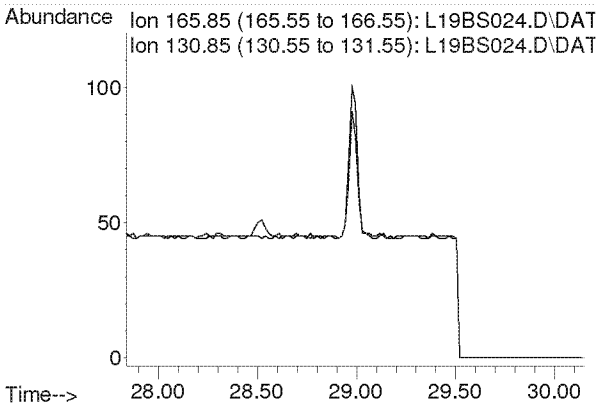


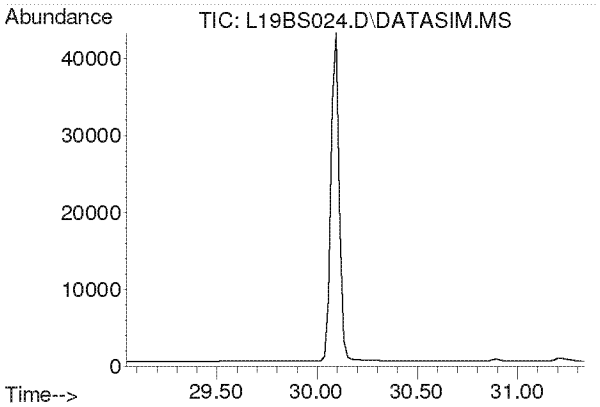
#48
Tetrachloroethylene
Concen: N.D.
Expected RT: 29.00 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 166

Sig	Exp Ratio
166	100
131	76.9



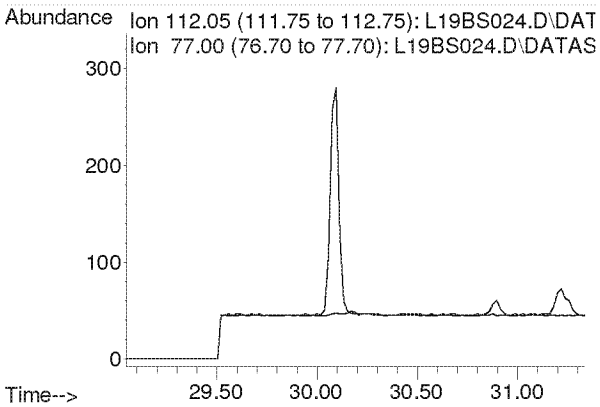


#49
Chlorobenzene
Concen: N.D.
Expected RT: 30.19 min

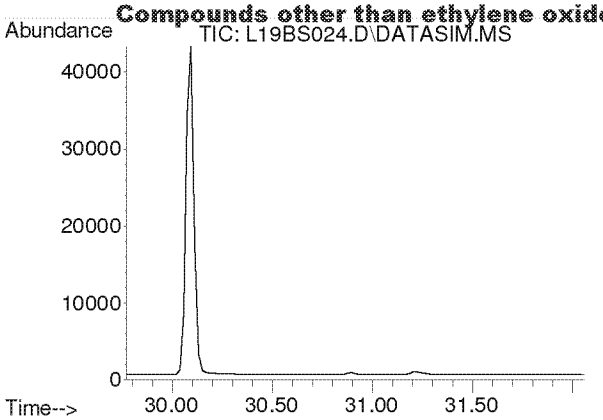
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 112

Sig	Exp Ratio
112	100
77	59.7



Compounds other than ethylene oxide were not quantitated.

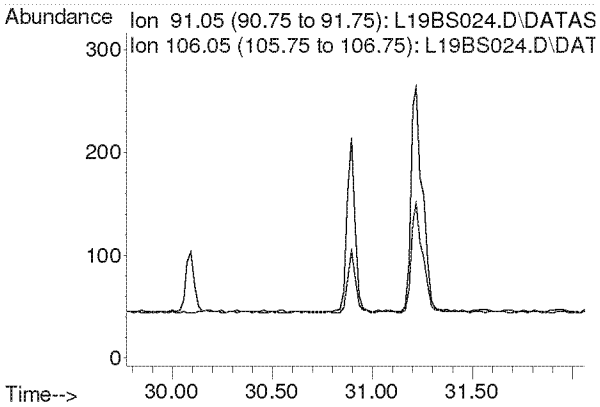


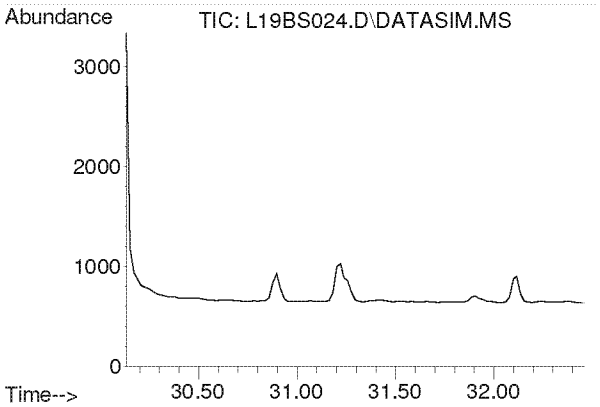
#50
Ethylbenzene
Concen: N.D.
Expected RT: 30.92 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	32.5



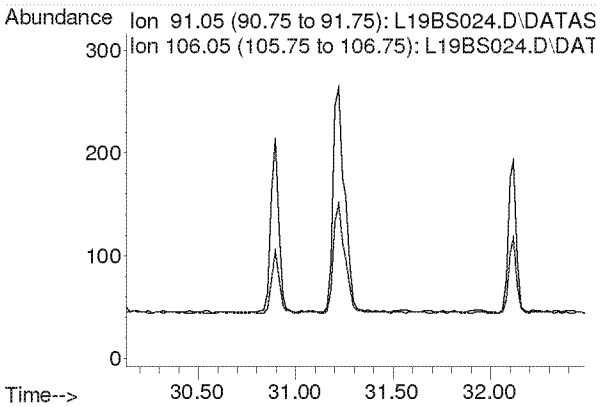


#51
m,p-Xylene
Concen: N.D.
Expected RT: 31.28 min

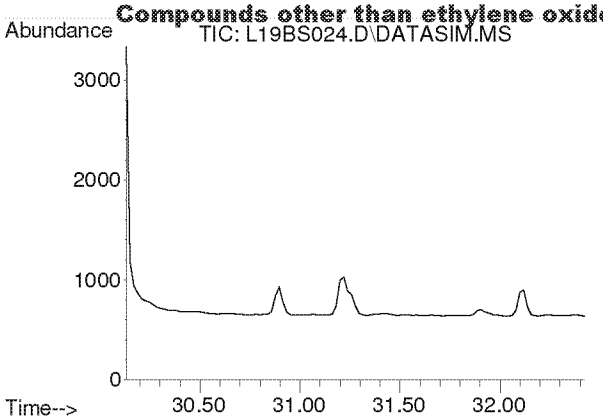
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	46.6



Compounds other than ethylene oxide were not quantitated.

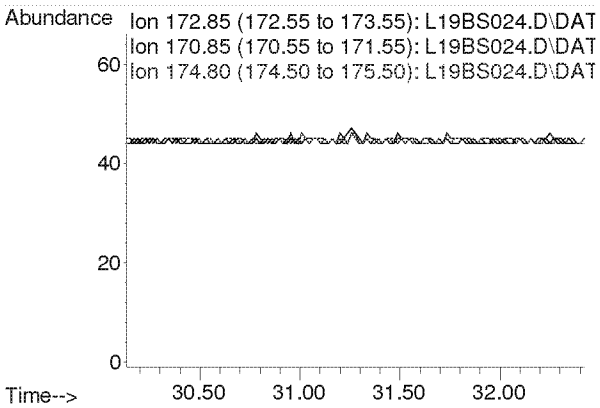


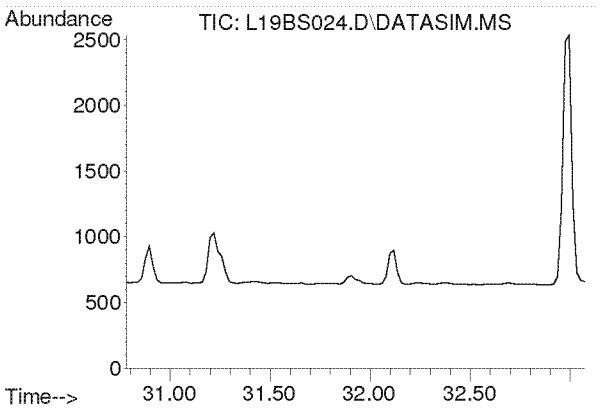
#52
Bromoform
Concen: N.D.
Expected RT: 31.28 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 173

Sig	Exp Ratio
173	100
171	51.3
175	48.9



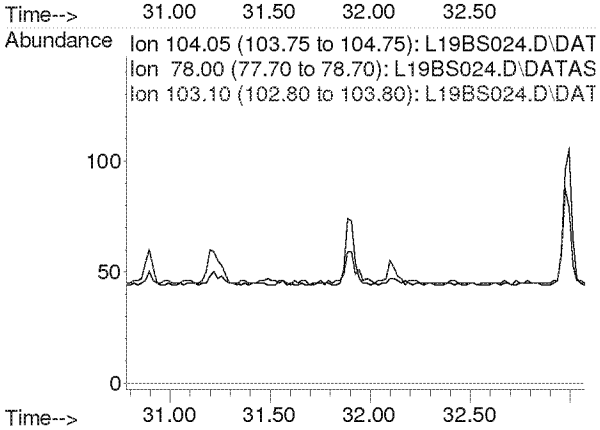


#53
Styrene
Concen: N.D.
Expected RT: 31.93 min

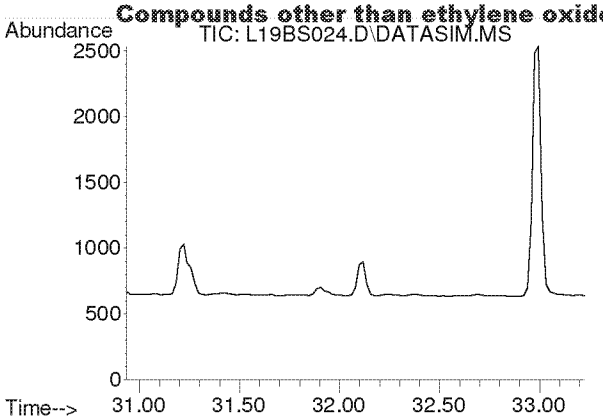
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 104

Sig	Exp Ratio
104	100
78	44.3
103	0.0



Compounds other than ethylene oxide were not quantitated.

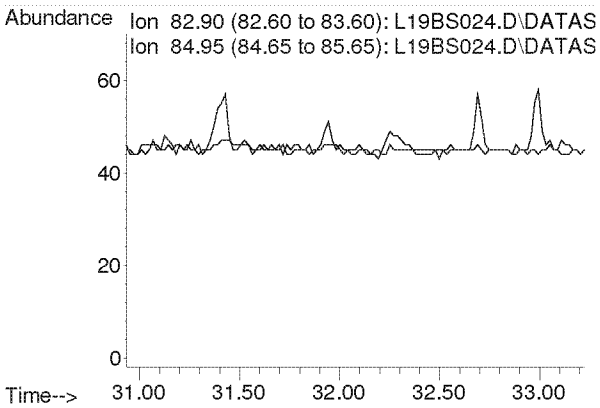


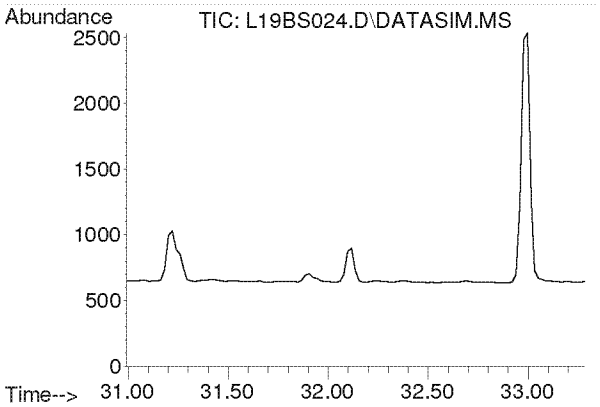
#54
1,1,2,2-Tetrachloroethane
Concen: N.D.
Expected RT: 32.08 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 83

Sig	Exp Ratio
83	100
85	64.5



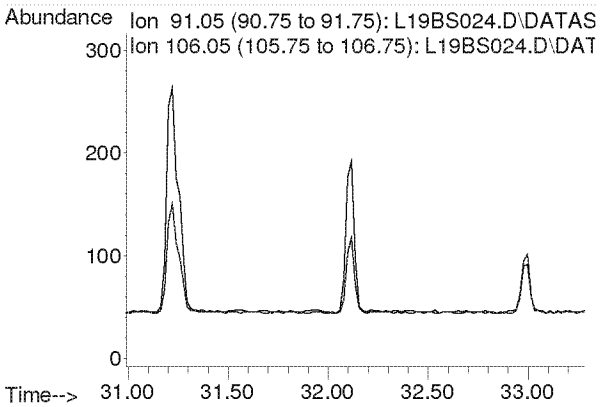


#55
o-Xylene
Concen: N.D.
Expected RT: 32.14 min

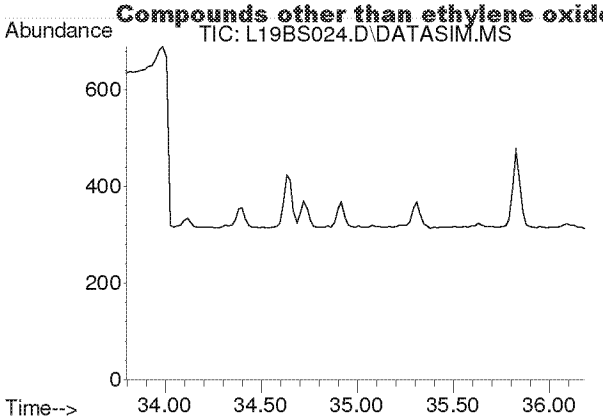
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 91

Sig	Exp Ratio
91	100
106	45.8



Compounds other than ethylene oxide were not quantitated.

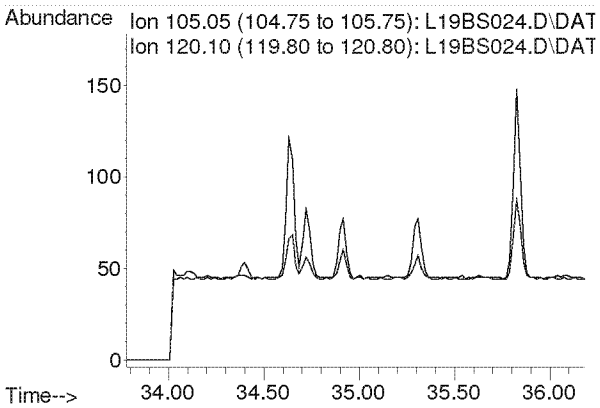


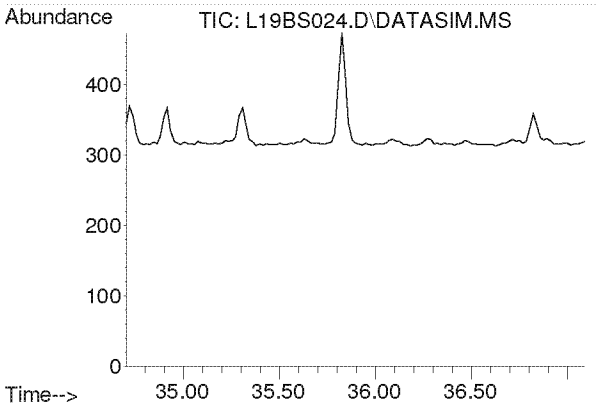
#56
1,3,5-Trimethylbenzene
Concen: N.D.
Expected RT: 34.94 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	46.0



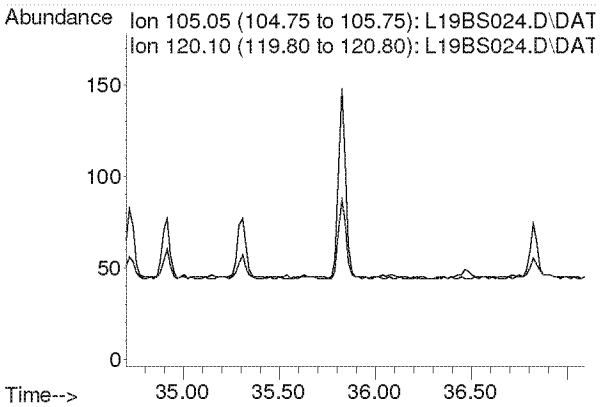


#57
1,2,4-Trimethylbenzene
Concen: N.D.
Expected RT: 35.85 min

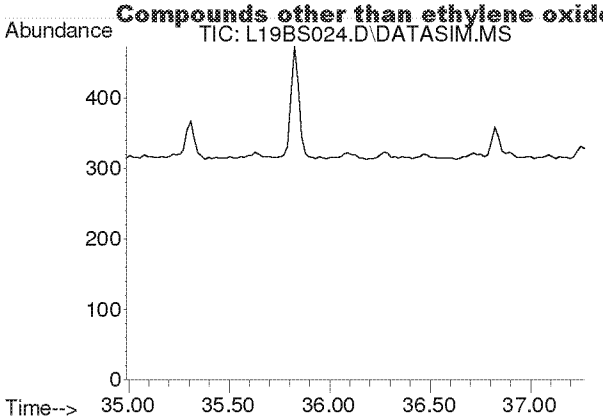
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 105

Sig	Exp Ratio
105	100
120	44.0



Compounds other than ethylene oxide were not quantitated.

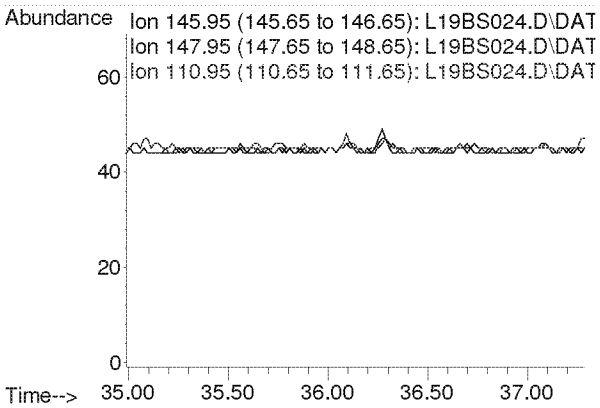


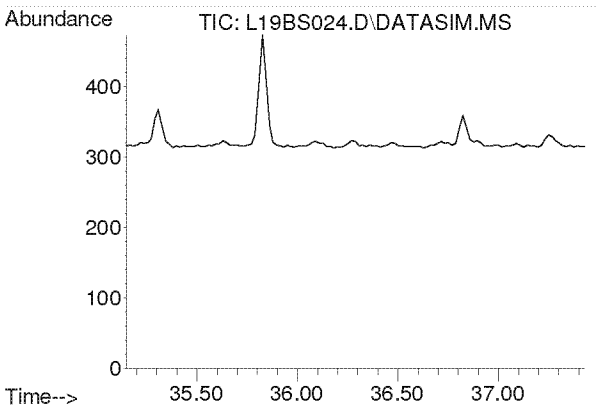
#58
m-Dichlorobenzene
Concen: N.D.
Expected RT: 36.13 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.1
111	40.1



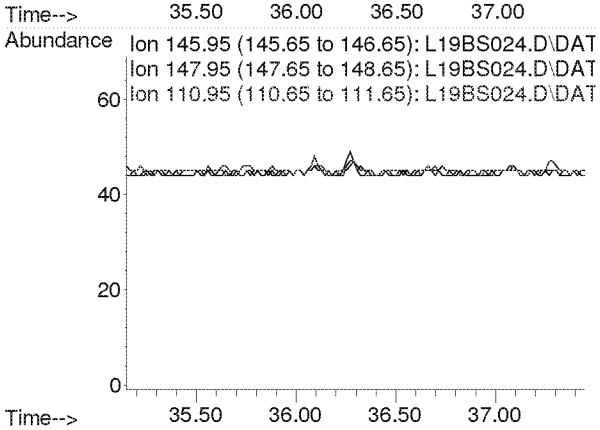


#59
p-Dichlorobenzene
Concen: N.D.
Expected RT: 36.29 min

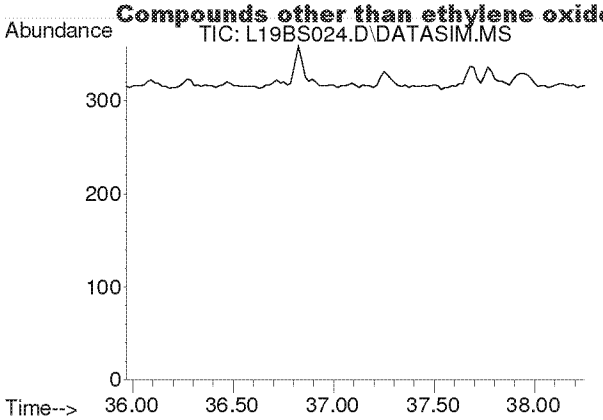
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.3
111	38.7



Compounds other than ethylene oxide were not quantitated.

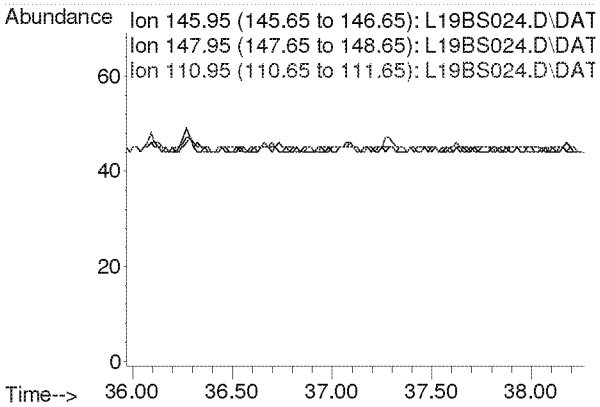


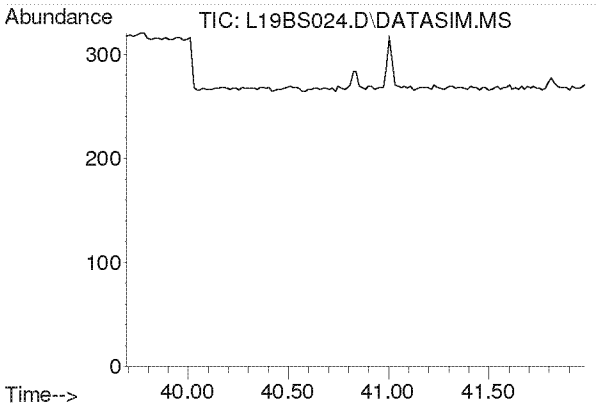
#60
o-Dichlorobenzene
Concen: N.D.
Expected RT: 37.11 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 146

Sig	Exp Ratio
146	100
148	64.0
111	40.8



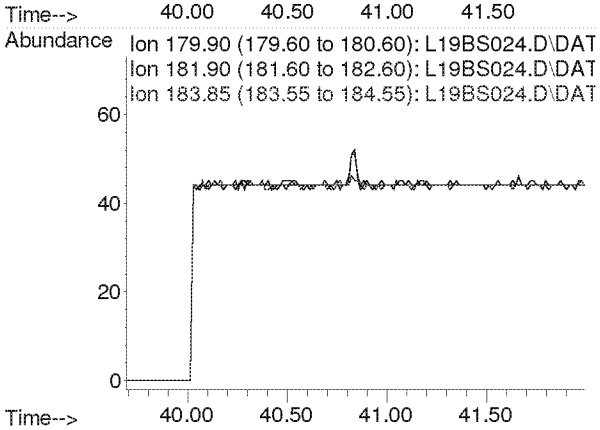


#61
1,2,4-Trichlorobenzene
Concen: N.D.
Expected RT: 40.84 min

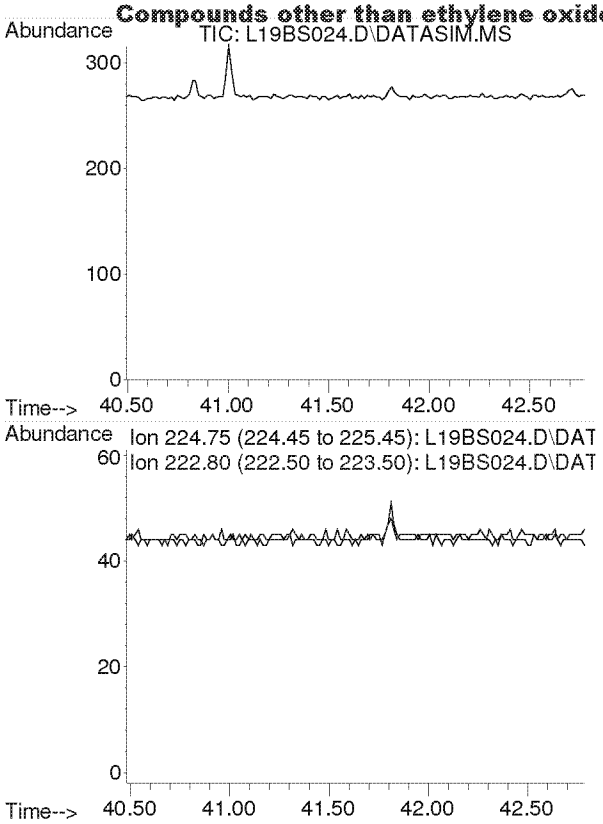
Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 180

Sig	Exp Ratio
180	100
182	94.6
184	30.2



Compounds other than ethylene oxide were not quantitated.



#62
Hexachloro-1,3-butadiene
Concen: N.D.
Expected RT: 41.63 min

Lab File: L19BS024.D
Acq: 20 Feb 2019 10:01 am

Tgt Ion: 225

Sig	Exp Ratio
225	100
223	62.4

Compounds other than ethylene oxide were not quantitated.

PREPARATION BENCH SHEET

B9B1907

Eastern Research Group

Matrix: Air | **Prepared using: Air Toxics - Summa Canister Prep** | **Printed: 2/19/2019 4:21:45PM**

Lab Number	Prepared	Initial (ml)	Final (ml)	Spike ID	Source ID	ul Spike	Comments
9020518-01 *TO-15 2019*	01/27/19 23:59	250	250	U.S. Environmental Protection Agency, Region 8			
9020703-01 *TO-15 2019*	02/02/19 23:59	250	250	U.S. Environmental Protection Agency, Region 8			
9020704-01 *TO-15 2019*	02/02/19 23:59	250	250	U.S. Environmental Protection Agency, Region 5			
9020710-01 *TO-15 2019*	02/02/19 23:59	250	250	U.S. Environmental Protection Agency, Region 6			
9020711-01 *TO-15 2019*	02/02/19 23:59	250	250	U.S. Environmental Protection Agency, Region 6			
9021222-01 *TO-15 2019*	02/08/19 23:59	250	250	U.S. Environmental Protection Agency, Region 6			
9021222-02 *TO-15 2019*	02/08/19 23:59	250	250	U.S. Environmental Protection Agency, Region 6			
9021401-05 *TO-15 2019*	02/12/19 09:48	250	250	U.S. Environmental Protection Agency - OAQPS	Ethylene Oxide only		Ethylene Oxide only
9021401-06 *TO-15 2019*	02/12/19 09:40	250	250	U.S. Environmental Protection Agency - OAQPS	Ethylene Oxide only		Ethylene Oxide only
9021401-07 *TO-15 2019*	02/12/19 10:06	250	250	U.S. Environmental Protection Agency - OAQPS	Ethylene Oxide only		Ethylene Oxide only
9021401-08 *TO-15 2019*	02/12/19 09:54	250	250	U.S. Environmental Protection Agency - OAQPS	Ethylene Oxide only		Ethylene Oxide only
9021401-09 *TO-15 2019*	02/12/19 09:17	250	250	U.S. Environmental Protection Agency - OAQPS	Ethylene Oxide only		Ethylene Oxide only
9021412-01 *TO-15 2019*	02/08/19 23:59	250	250	U.S. Environmental Protection Agency, Region 6			
9021412-02 *TO-15 2019*	02/08/19 23:59	250	250	U.S. Environmental Protection Agency, Region 6			

Spiking Witnessed By: Date | Preparation Reviewed By: 2-20-19 Date | Extracts Received By Date

Compounds other than ethylene oxide were not quantitated.

PREPARATION BENCH SHEET

B9B1907

Eastern Research Group

Matrix: Air **Prepared using: Air Toxics - Summa Canister Prep** **Printed: 2/19/2019 4:21:45PM**

Lab Number	Prepared	Initial (ml)	Final (ml)	Spike ID	Source ID	ul Spike	Comments
B9B1907-BLK1	02/14/19 08:00	250	250				T-H2-563
B9B1907-DUP1	02/08/19 23:59	250	250		9021222-01		
B9B1907-DUP2	02/08/19 23:59	250	250		9021222-02		
B9B1907-DUP3	02/08/19 23:59	250	250		9021412-01		
B9B1907-DUP4	02/08/19 23:59	250	250		9021412-02		

Spiking Witnessed By Date

Preparation Reviewed By Date

Extracts Received By Date

Compounds other than ethylene oxide were not quantitated.

ERG Eastern Research Group, Inc.

601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

ERG Lab ID # 9021401-05

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: [illegible]

City/State: [illegible] IL

AQS Code:

Collection Date: 2/4/19

Canister Number: 711

Lab Initial Can. Press. ("Hg): 29.8

Cleaning Batch # : 42-552

Date Can. Cleaned: 1/31/19

Options:

SNMOC (Y/N):

TOXICS (Y/N): Y

METHANE (Y/N):

Duplicate Event (Y/N): N

Duplicate Can # :

Relinquished by: AR Date: 2/4/19

Field Setup

Received by: S. Dvila Date: 2/10/19

Operator: S. Hamilton

System #: [illegible]

Setup Date: 2/10/19

MFC Setting:

Elapsed Timer Reset (Y/N):

Canister Valve Opened (Y/N): Y @ 10:00 AM

Field Initial Can. Press.: -29.2 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 2/12/19

Operator: S. Dvila

Sample Duration (3 or 24 hr): 24

Elapsed Time:

Field Final Can. Press.: -4.9 psig psia "Hg (Circle one)

Status: VALID VOID (Circle one)

Canister Valve Closed (Y/N): Y @ 9:48 AM

Relinquished by: S. Dvila Date: 2/12/19

Lab Recovery

Received by: KB Date: 2/14/19

Lab Final Can. Press.: 4.00 psig "Hg (Circle one) Converted to psia:

Status: VALID VOID (Circle one)

Gauge: 1 2 (Circle one)

If void, why:

Samples stored in Air Tox Lab (Room 130)

5-2016

Comments: [illegible] : 29.5" @ 10:11 AM | 29.2" @ 10:16 AM

Ambient temp @ [illegible]: 29°F

Ambient temp @ [illegible]: 33°F

2nd Pressure check: -4" @ 10:39 AM

White: Sample Traveler Canary: Lab Copy Pink: Field Copy

Compounds other than ethylene oxide were not quantitated.

ERG Eastern Research Group, Inc.

ERG Lab ID # 902401-06

601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: Water tower

Canister Number: 061

City/State: Willowbrook, IL

Lab Initial Can. Press. ("Hg): 29.8

AQS Code:

Cleaning Batch # : H1-548

Collection Date: 2/11/19

Date Can. Cleaned: 1/28/19

Options:

SNMOC (Y/N):

Duplicate Event (Y/N): N

TOXICS (Y/N): Y

Duplicate Can # :

METHANE (Y/N):

Relinquished by: KA

Date: 2/12/19

Field Setup

Received by: S. Divita

Date: 2/11/19

Operator: S. Divita

MFC Setting:

System #: 10312

Elapsed Timer Reset (Y/N):

Setup Date: 2/11/19

Canister Valve Opened (Y/N): Y @ 8:00 am

Field Initial Can. Press.: -29 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 2/12/19

Sample Duration (3 or 24 hr): 24

Operator: S. Divita

Elapsed Time:

Field Final Can. Press.: -4.9 psig psia "Hg (Circle one)

Status: VALID VOID (Circle one)

Canister Valve Closed (Y/N): Y @ 9:40 am

Relinquished by: S. Divita

Date: 2/12/19

Lab Recovery

Received by: KB

Date: 2/14/19

Lab Final Can. Press.: 3.50 psig "Hg (Circle one)

Converted to psia:

Status: VALID VOID (Circle one)

Gauge: 1 2 (Circle one)

If void, why:

Samples stored in Air Tox Lab (Room 130)

5-2016

Comments: Leak check: 30" @ 11:55 am / 30" @ 12:00 pm

Ambient temp @ deployment: 30°F

Retrieval: 33°F

2nd pressure check: -3.9" @ 10:37 am

White: Sample Traveler

Canary: Lab Copy

Pink: Field Copy

Compounds other than ethylene oxide were not quantitated.

ERG
Eastern Research Group, Inc.
601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

ERG Lab ID # 9021401-07

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: West Neighborhood
Canister Number: 171
City/State: Willowbrook, IL
Lab Initial Can. Press. ("Hg): 29.8
AQS Code:
Cleaning Batch # : H2-552
Collection Date: 2/11/19
Date Can. Cleaned: 1/31/19
Options:
SNMOC (Y/N):
Duplicate Event (Y/N): N
TOXICS (Y/N): Y
Duplicate Can # :
METHANE (Y/N):
Relinquished by: HR
Date: 2/11/19

Field Setup

Received by: S. Divita
Date: 2/11/19
Operator: S. Hamilton
MFC Setting:
System #: 1010
Elapsed Timer Reset (Y/N):
Setup Date: 2/11/19
Canister Valve Opened (Y/N): Y @ 10:08am
Field Initial Can. Press.: 28.5 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 2/12/19
Sample Duration (3 or 24 hr): 24
Operator: S. Divita
Elapsed Time:
Field Final Can. Press.: -5 psig psia "Hg (Circle one)
Status: VALID VOID (Circle one)
Canister Valve Closed (Y/N): Y @ 10:06am
Relinquished by: S. Divita
Date: 2/12/19

Lab Recovery

Received by: KB
Date: 2/14/19
Lab Final Can. Press.: 4.50 psig "Hg (Circle one)
Converted to psia:
Status: VALID VOID (Circle one)
Gauge: 1 2 (Circle one)
If void, why:

Samples stored in Air Tox Lab (Room 130)

5-2016

Comments: Leak check: 28.8" @ 10:03am, 28.5" @ 10:08am
Ambient temp @ deployment: 24° F
" " recovery: 33°F
2nd pressure check: -3.4" @ 10:28am

White: Sample Traveler
Canary: Lab Copy
Pink: Field Copy

Compounds other than ethylene oxide were not quantitated.

ERG Lab ID # 9021401-08

ERG
Eastern Research Group, Inc.
601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: Lincolnlab S. 3C
Canister Number: A21119
City/State: Marion, IL
Lab Initial Can. Press. ("Hg): 29.8
AQS Code:
Cleaning Batch # : H2-552
Collection Date: 2/11/19
Date Can. Cleaned: 1/31/19
Options:
SNMOC (Y/N):
Duplicate Event (Y/N): N
TOXICS (Y/N): Y
Duplicate Can # :
METHANE (Y/N):
Relinquished by: KR
Date: 2/4/19

Field Setup

Received by: S. Divita
Date: 2/11/19
Operator: S. Hamilton
MFC Setting:
System #: 1c076
Elapsed Timer Reset (Y/N):
Setup Date: 2/11/19
Canister Valve Opened (Y/N): Y @ 10:28 am
Field Initial Can. Press.: 28.9" psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 2/12/19
Sample Duration (3 or 24 hr): 24
Operator: S. Divita
Elapsed Time:
Field Final Can. Press.: -5 psig psia "Hg (Circle one)
Status: VALID VOID (Circle one)
Canister Valve Closed (Y/N): Y @ 9:54 Am
Relinquished by: S. Divita
Date: 2/12/19

Lab Recovery

Received by: KB
Date: 2/14/19
Lab Final Can. Press.: 4.00 psig "Hg (Circle one)
Converted to psia:
Status: VALID VOID (Circle one)
Gauge: 1 2 (Circle one)
If void, why:

Samples stored in Air Tox Lab (Room 130)

5-2016

Comments: Leak check: 29" @ 10:23 Am / 28.5" @ 10:28 Am
Ambient temp @ equipment: 29°F
" " Picture: 33°F
2nd check of pressure: -4.9" @ 10:22 Am

White: Sample Traveler
Canary: Lab Copy
Pink: Field Copy

Compounds other than ethylene oxide were not quantitated.

ERG
Eastern Research Group, Inc.
601 Keystone Park Drive, Suite 700, Morrisville, NC 27560

ERG Lab ID # 9021401-09

AIR TOXICS SAMPLE CHAIN OF CUSTODY

Lab Pre-Sampling

Site Code: [illegible] WI
Canister Number: 629
City/State: Whitewater
Lab Initial Can. Press. ("Hg): 29.8
AQS Code:
Cleaning Batch # : 41-548
Collection Date: [illegible]
Date Can. Cleaned: 1/23/19
Options:
SNMOC (Y/N):
Duplicate Event (Y/N): N
TOXICS (Y/N): Y
Duplicate Can # :
METHANE (Y/N):
Relinquished by: LR
Date: 2/4/19

Field Setup

Received by: S. Divita
Date: [illegible]
Operator: S. Divita
MFC Setting:
System #: [illegible]
Elapsed Timer Reset (Y/N):
Setup Date: 2/7/19
Canister Valve Opened (Y/N): Y 8:30 am
Field Initial Can. Press.: -30 psig psia "Hg (Circle one)

Field Recovery

Recovery Date: 2/12/19
Sample Duration (3 or 24 hr): 24
Operator: S. Divita
Elapsed Time:
Field Final Can. Press.: -4.1 psig psia "Hg (Circle one)
Status: VALID VOID (Circle one)
Canister Valve Closed (Y/N): Y 9:17 am
Relinquished by: S. Divita
Date: 2/12/19

Lab Recovery

Received by: KB
Date: 2/14/19
Lab Final Can. Press.: 2.4 psig "Hg (Circle one)
Converted to psia:
Status: VALID VOID (Circle one)
Gauge: 1 2 (Circle one)
If void, why:

Samples stored in Air Tox Lab (Room 130)

5-2016

Comments: Leak check: -3" @ 1:3 AM -2" @ 9:15 AM
Ambient temp @ beginning of event: 20°F
" " end of event: 30°F
2nd pressure check: -3" @ 10:35 AM

White: Sample Traveler
Canary: Lab Copy
Pink: Field Copy